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More than a billion unit miles of operation — that's the mark established by General Motors Diesel locomotives. And with American railroads adding daily to the 5,000,000 General Motors Diesel horsepower already on the rails, the second billion will be coming up fast. The remarkable advances made by these locomotives in passenger, freight and switching service — their unmatched records for dependability and economy — are conclusive reasons for General Motors Diesel leadership.

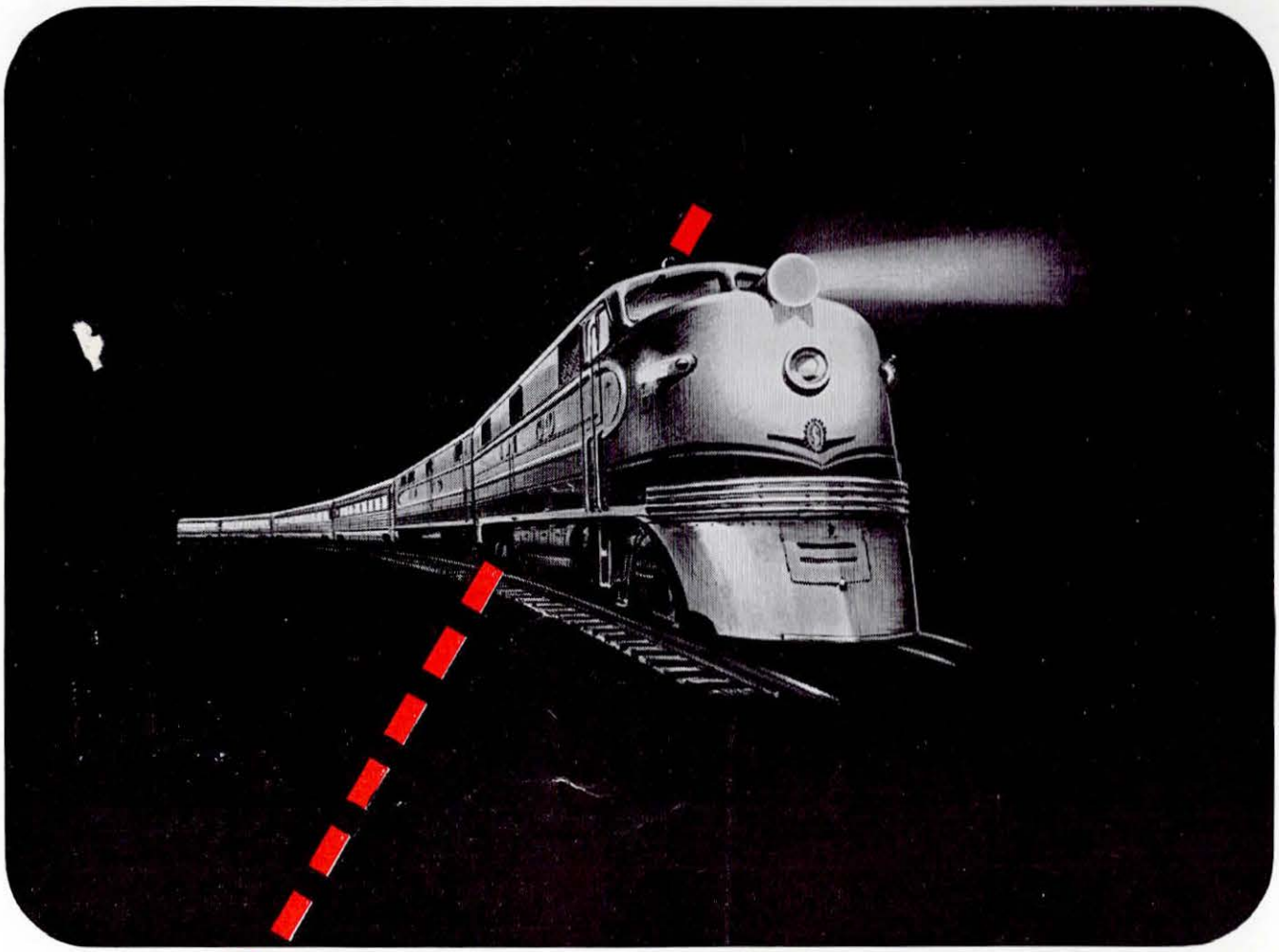
HELP AMERICA PRODUCE FOR PEACE
Turn in SCRAP Iron and Steel

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS • LA GRANGE, ILL.

Home of the Diesel Locomotive



EXIDE-IRONCLAD BATTERIES

furnish dependable power for Diesel locomotive cranking

Exide-Ironclad Batteries start the giant Diesels on their way. And there's an Exide-Ironclad to do any Diesel cranking job . . . from the rugged road engines to the versatile yarders.

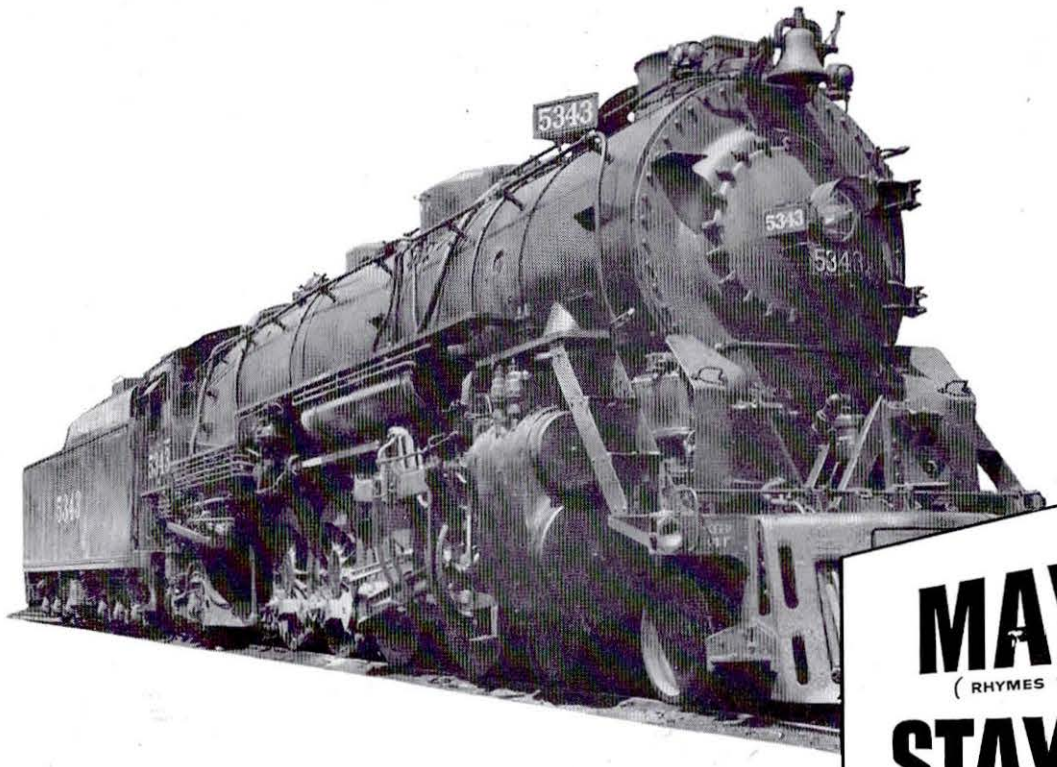
Exide-Ironclad Batteries differ from all other batteries in performance and in construction. One major difference is the positive plate, which consists of a series of tubes containing the active material. So fine are these slots that, while permitting easy access of the electrolyte, they retard the active material from readily washing out or jarring loose.

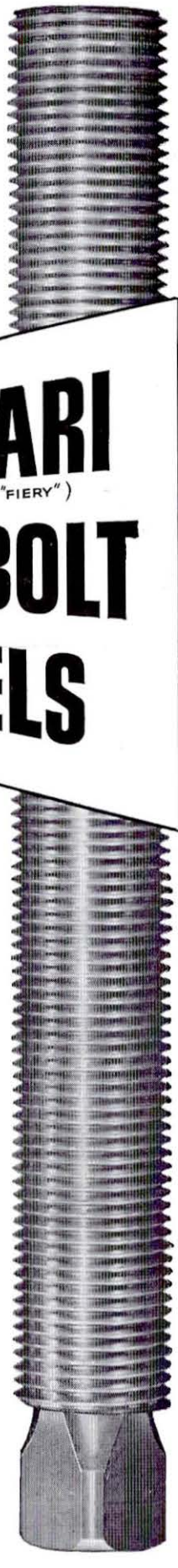
And the result—*high power ability, high electrical efficiency, ruggedness and long life.* Only Exide-Ironclad Batteries have ALL FOUR of these vital characteristics. That's why they are so widely used, not only for Diesel starting, but for car lighting, air-conditioning, battery electric trucks and other heavy-duty battery applications.

Since 1891, Exide Batteries have been serving America's railroads with dependability, long life, economy and ease of maintenance.

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

Published weekly by Simmons-Boardman Publishing Corporation, Orange, Conn. Executive Offices, 30 Church Street, New York 7, N. Y. Entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price $6.00 for one year, U. S. and Canada. Single copies, 50 cents each.
Vol. 124, No. 17.





MAYARI
(RHYMES WITH "FIERY")
STAYBOLT STEELS

Used continuously for 10 years

There's nothing new or untried about Mayari Staybolt Steels. Some railroads have been using them continuously since 1938. A number of additional roads started using Mayari more recently. Others are currently running test installations.

There are sound reasons why Mayari Staybolt Steels are now replacing staybolt materials heretofore in general use. Mayari Steels are priced considerably lower....they are superior in tensile strength....they have high ductility....their fatigue-resistance is excellent....they are equally suitable for conventional heading or for seal-welding.

Bethlehem metallurgists developed these special grades of alloy steel for one purpose—to provide the railroad industry with a lower-cost staybolt material equal or superior to any on the market.

If you haven't tried staybolts made from Mayari Staybolt Steels we suggest you make a test installation, then compare costs and results.

Detailed information on Mayari Staybolt Steels is available from the nearest Bethlehem sales office.

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation

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Rural

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...a daily chore for the railroads

It's Spring! Time for plowing and planting in Silo Junction.

While you're reading this, the thousand-and-one things a farm thrives on nowadays are speeding toward rail sidings all over America.

That's the Railroads' job. Toting tonnage faster, farther, and thriftier than any other means of transportation.

A.C.F.'s job? Turning out more and better freight cars—but keeping costs down! Building the all-welded cars that can take the stresses and strains of swifter schedules. And doing it *economically* with assembly-line techniques and mass production facilities—to produce the *tonnage-dependable* rolling stock that helps build a railroad's reputation.

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A.C.F. CAR BUILDERS TO AMERICA'S RAILROADS

AO Sta-Set Finger Cots are

"Tailored To The Job"

These AO Finger Guards are built to the same protective, comfort, and "tailored-to-the-job" standards as the larger items of AO Safety Clothing. The 8X141 Finger Cots, made from soft, flexible grain leather, are ideal for jobs where sensitivity of touch is a must, as in soldering small wire. For jobs such as polishing, burring and grinding small parts, where rough usage is customary, companion Finger Cot 8X142 of chrome tanned split leather is recommended.

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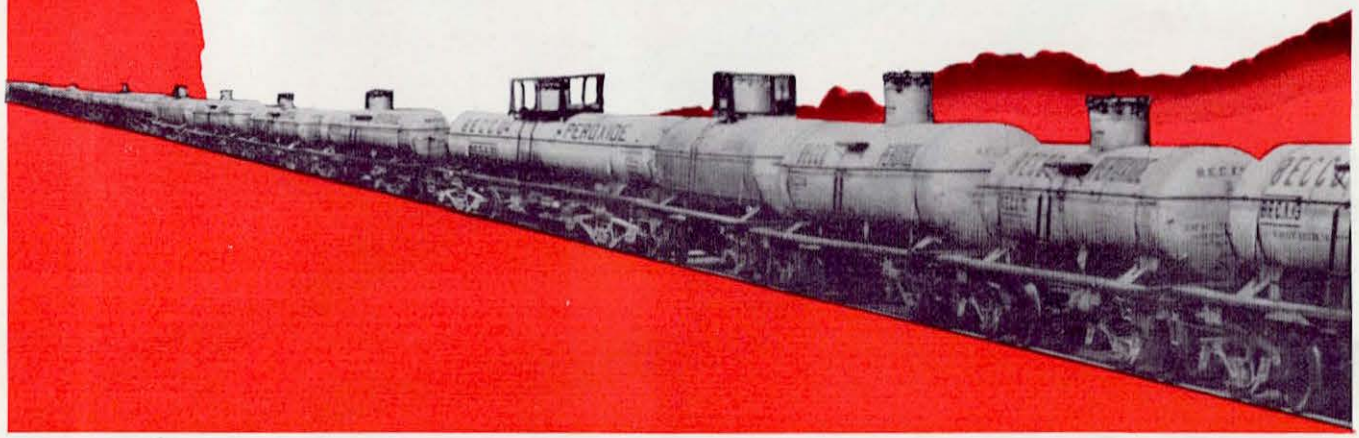
TANK CARS WITH TANKS OF ALCOA ALUMINUM



Tank-car shortage? Specify tank cars of Alcoa Aluminum. Car builders and Alcoa have the experience needed for successful tank-car construction—twenty years of building aluminum tank cars, sixty years of working with light metals. Car manufacturers are familiar with both riveted and welded construction.

NEED NO SPECIAL LININGS—Expensive linings are not needed with aluminum tank cars.

MAINTENANCE SAVINGS—Alcoa Aluminum's resistance to chemical action of many ladings means lower maintenance costs.

NO SPARKING—Tanks of Alcoa Aluminum are non-sparking—an added safety factor when handling and hauling flammable liquids.

Why not see how Alcoa Aluminum can help solve your tank-car problem and give you lower maintenance costs? Call your Alcoa representative at the nearest sales office. ALUMINUM COMPANY OF AMERICA, 2178 Gulf Building, Pittsburgh 19, Pa.

Modern Railroading Calls for MAXIMUM Economies ⇨

No damage to contents . . . no effect on tanks . . . no costly linings required . . . with these and many other ladings, including food products:

Glacial Acetic Acid — Glycerin — Acetic Anhydride — Hydrogen Peroxide
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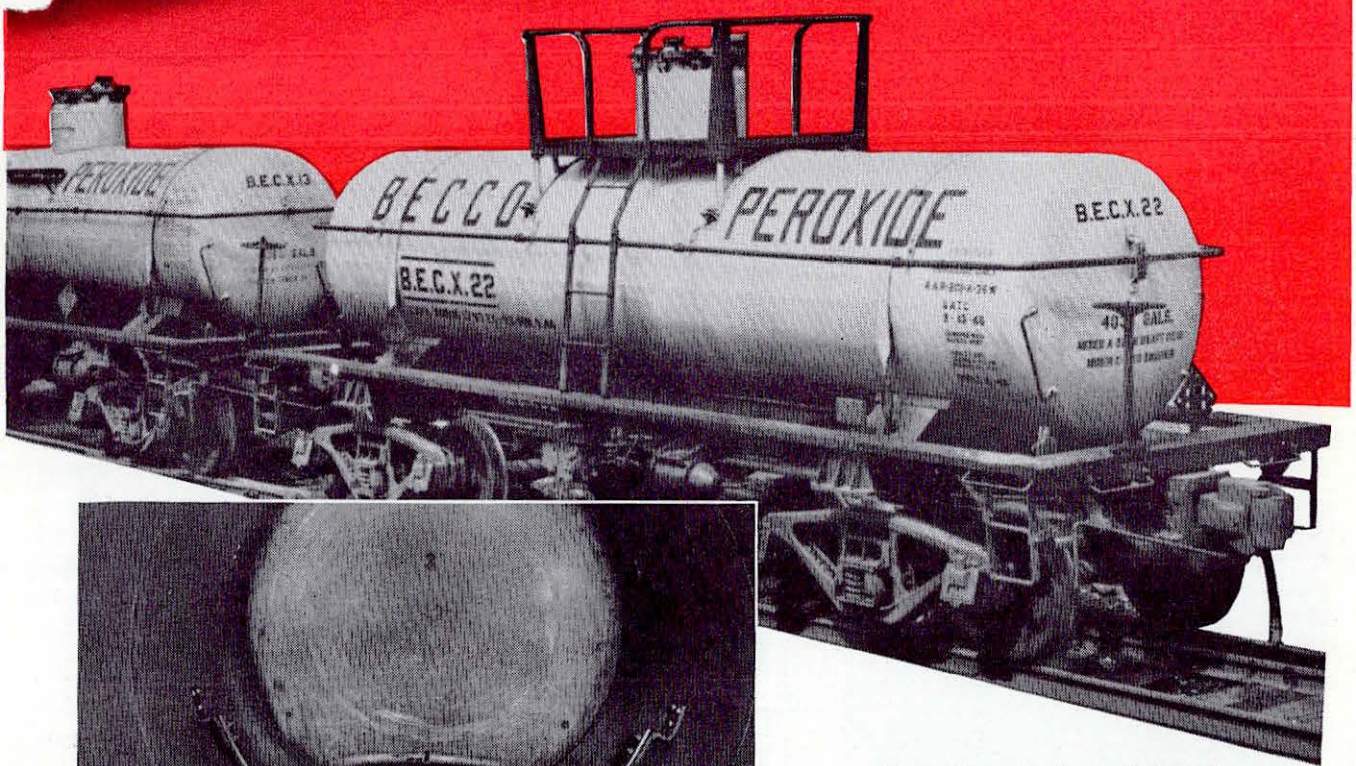
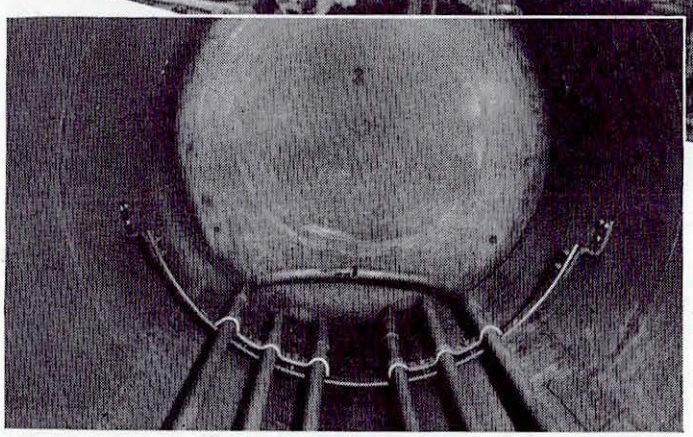
Ethyl Acetate — Water-white Rosin — High-concentration Nitric Acid





These 15 new tank cars, built of Alcoa Aluminum, will transport 30% hydrogen peroxide for Buffalo Electro-Chemical Co., Inc. Aluminum, unlike some other common metals, does not promote decomposition of hydrogen peroxide.

ALCOA FIRST IN ALUMINUM

ALCOA ALUMINUM 1888 1948 60 YEARS OF SERVICE

A "NATURAL" IN PUBLIC RELATIONS

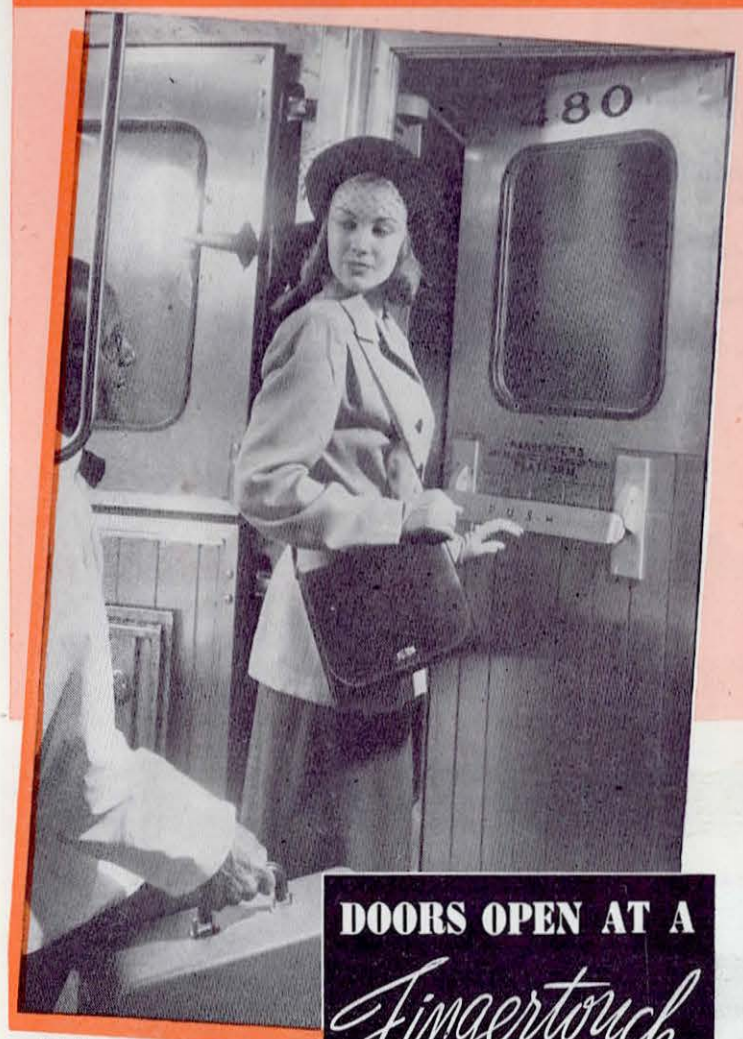


Photo Courtesy of
NEW YORK CENTRAL

DOORS OPEN AT A *Fingertouch*

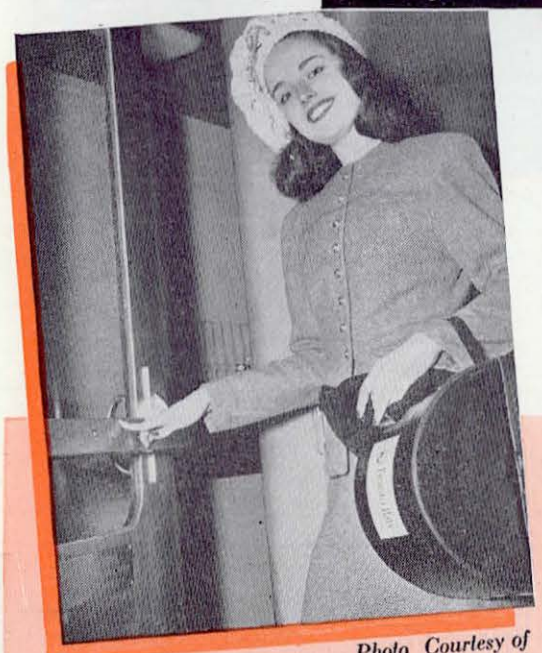


Photo Courtesy of
THE PENNSYLVANIA RAILROAD

NP

Automatic

END DOOR OPERATORS

● The popularity of N.P. Automatic End Door Operators with railroads and passengers alike, offers no impenetrable mystery. The answer is simply that observant railroad men recognize a perfect set-up for improving relations with their traveling public.

As for the passengers . . . they act as their own demonstrators—and love it. Few can resist the fascination of end doors that open magically at mere fingertip pressure. And all can remember past discomforts of struggling with stubborn door checks. The modern way is more fun—and decidedly more convenient! Entirely safe, too.

So, leading railroads serving the entire country are hastening to install N.P. Automatic End Door Operators for swinging or sliding end doors of their new passenger cars—and even on remodeled coaches where sufficient space above doors is available for the door control mechanism.

Incidentally, the door action—including automatic closing—is timed to conserve conditioned air within the coaches. Publication No. 1063 tells the complete story. Write for copies.

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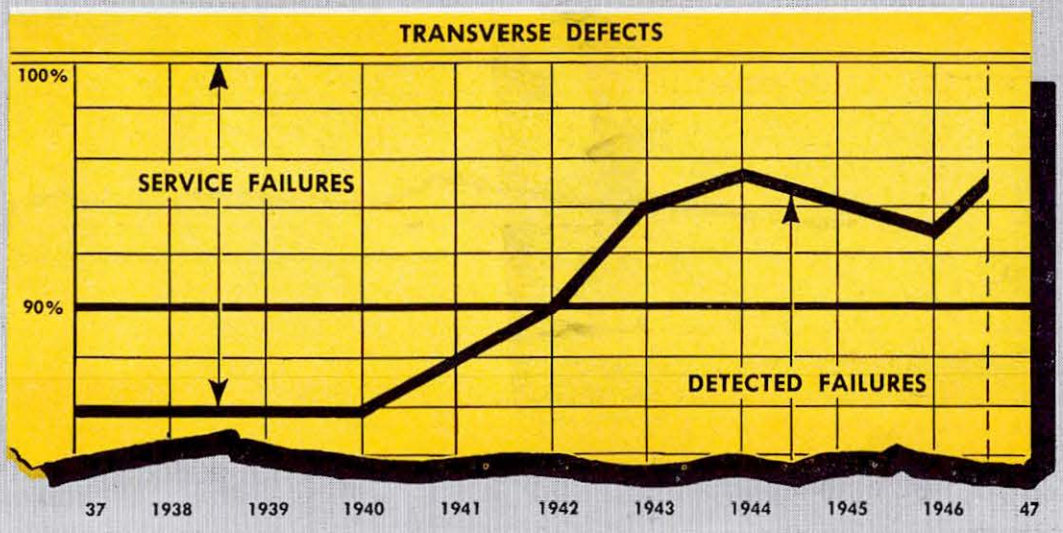
Detected Rail Failures / Total Failures (DETECTED & SERVICE) = Rail Testing Efficiency



Railroads Using SPERRY RAIL SERVICE Attain 95% Efficiency in Rail Testing

The chart above shows the average efficiency in rail testing attained by railroads who report all service failures to Sperry and who *use Sperry Rail Service exclusively.* For some of these, efficiencies are *well above* the average which has been graphed; for all, the *trend has been upward* over the years.

Improved rail testing efficiencies are principally the result of constantly improved service by Sperry-operated Detector Cars. Better performance has been accomplished by continuous research in rail defects and rail testing, enabling Sperry to find:

1. MORE AND SMALLER TRANSVERSE DEFECTS than any other method of rail testing.

2. MORE LONGITUDINAL DEFECTS than any other method of rail testing.

More than 100 Railroads recognize that only with Sperry Rail Service are highest efficiencies in rail testing available—resulting in maximum protection against derailments, and therefore:

1. Increased Public Safety

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Today as always, Sperry stands ready to make comparative demonstration tests to prove this superior detection performance.

SP-126

SPERRY RAIL SERVICE

DIVISION OF SPERRY PRODUCTS, INC.
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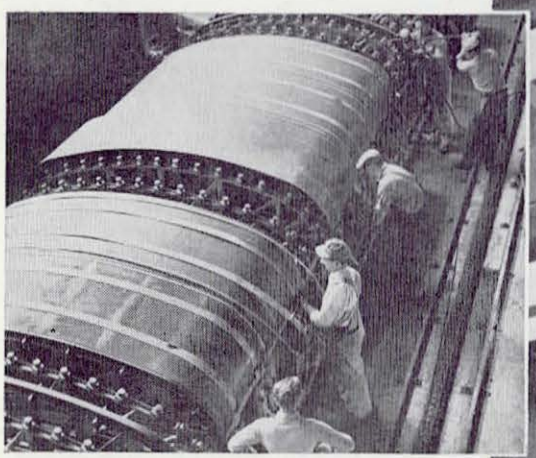
U·S·S COR-TEN lends itself readily to mass production methods

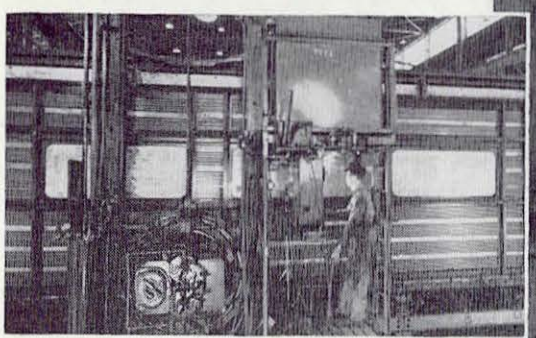
...another reason why

"COR-TEN Equipment" HAS COME TO MEAN

MASS PRODUCING all-welded gondolas in the car shops of the Milwaukee Road. From five feeder lines, sub-assemblies move steadily forward to arrive at two main assembly lines for final welding as shown here.

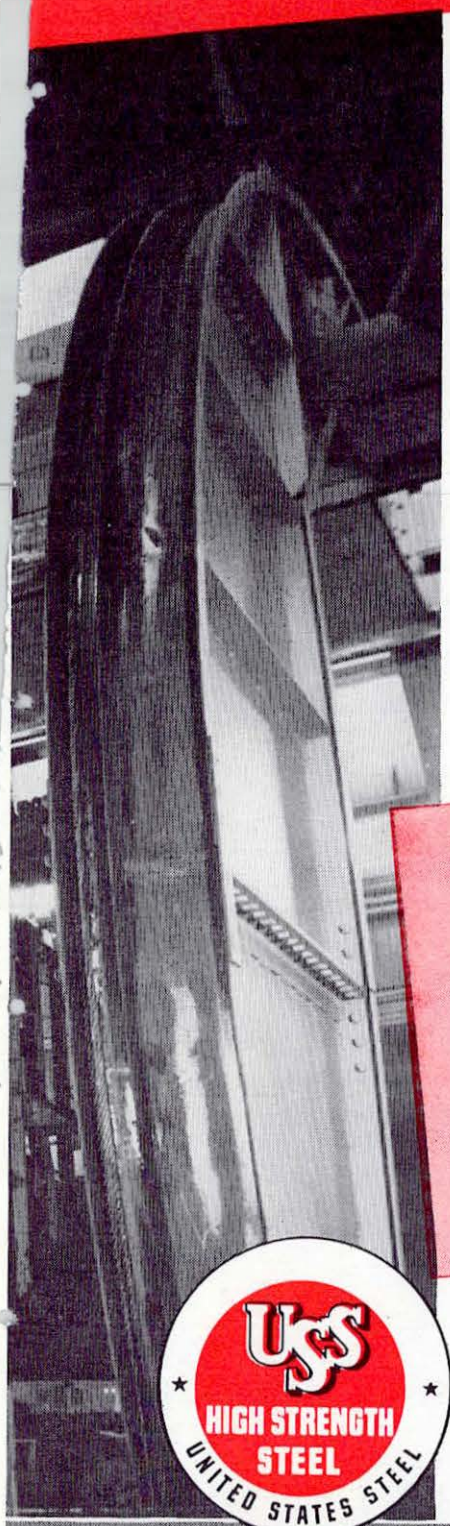


WELDING A PASSENGER CAR ROOF into one integral unit takes slightly over 2 hours at Pullman-Standard. The welding fixture, 120 ft. long is a double unit so arranged that while one roof is being welded another is being fitted up as shown.



PASSENGER CAR SIDE FRAMES and side sheets are welded together on automatic spot-welding machine designed by Pullman-Standard. Machine covers all surfaces, makes 7000 spot welds in 3 hours.

"the best in lightweight construction"



THE highly successful performance of U·S·S COR-TEN in the quantity production of both freight and passenger cars is due to an important and outstanding quality of this premier high strength steel—its *uniformity*.

The fact that COR-TEN's physical, chemical and metallurgical properties are rigidly controlled, results in its consistent and uniform behavior in all phases of fabrication—in cold forming, hot pressing, gas cutting and the various methods of welding.

This makes it possible in working with COR-TEN to set up routine fabricating and assembly procedures that not only minimize the time and effort required but that can be depended upon to produce high quality results.

The superior workability of U·S·S COR-TEN and particularly its excellent and uniform welding properties have been taken advantage of by those car builders and railroad car shops that have made the biggest strides in applying high-speed welding to mass carbuilding.

For example, Pullman Standard by employing the most modern spot- and arc-welding equipment, built lightweight welded box cars on a production line basis. Today they also mass produce streamlined passenger cars—spot-welding an entire car roof in one integral unit in slightly more than 2 hours . . . and 2 entire car sides in slightly over 3 hours.

American Car & Foundry Company started using COR-TEN in 1934, the year in which COR-TEN was introduced, and have been building cars with this pioneer high strength steel ever since. As illustrated on the large picture at the left, ACF has developed a mass-production set-up for the assembly of railway cars. All large sections are fitted into position as completely welded sub-assemblies, where they are held temporarily by tack welds until they are finish-welded in the rotating positioners. Because COR-TEN welds easily, this assembly process is quick and efficient.

The Milwaukee Road initiated in its shops mass-production methods for speeding up the fabrication of 50-ton all-welded box cars. Using heavy spot-welding and arc-welding equipment and simplified assemblies they are now turning them out at the rate of 10 per day.

U·S·S COR-TEN is being used in similar operations at General American, in the shops of the Pennsylvania Railroad and elsewhere—not only because it insures light weight at low cost, unusual ruggedness, and a high resistance to atmospheric corrosion, but because COR-TEN's uniform fabricating qualities keep high-speed production lines flowing smoothly.

The qualities that make U·S·S COR-TEN ideally suited for mass production methods are equally advantageous to those shops building cars in smaller lots and without the benefit of special tools and equipment.

How easy it is to use COR-TEN is best illustrated by a letter received from far away Australia. Written by the Chairman of the Victorian State Railways who introduced COR-TEN in the first streamliner built below the Equator, it says:—"We are delighted with the smoothness with which the work has progressed. Our men quickly adapted themselves to the new steel. No difficulty whatever was experienced with the fabrication and assembly."

USS HIGH STRENGTH STEEL UNITED STATES STEEL

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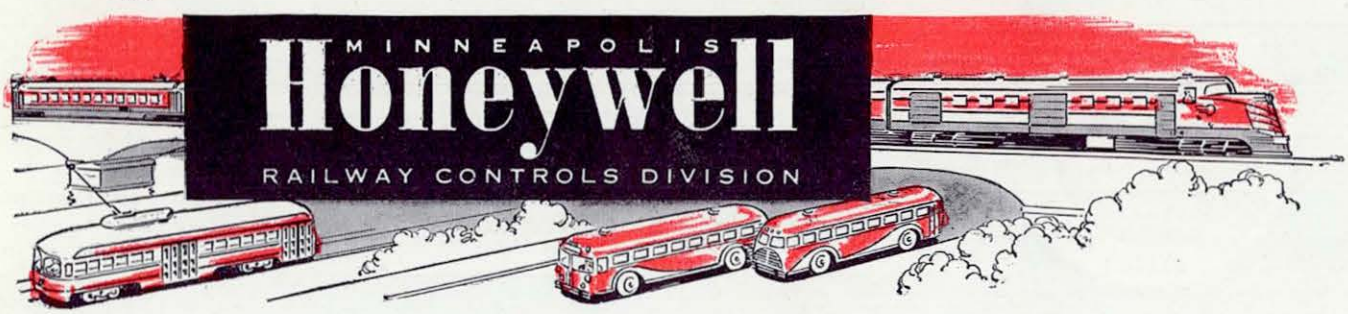

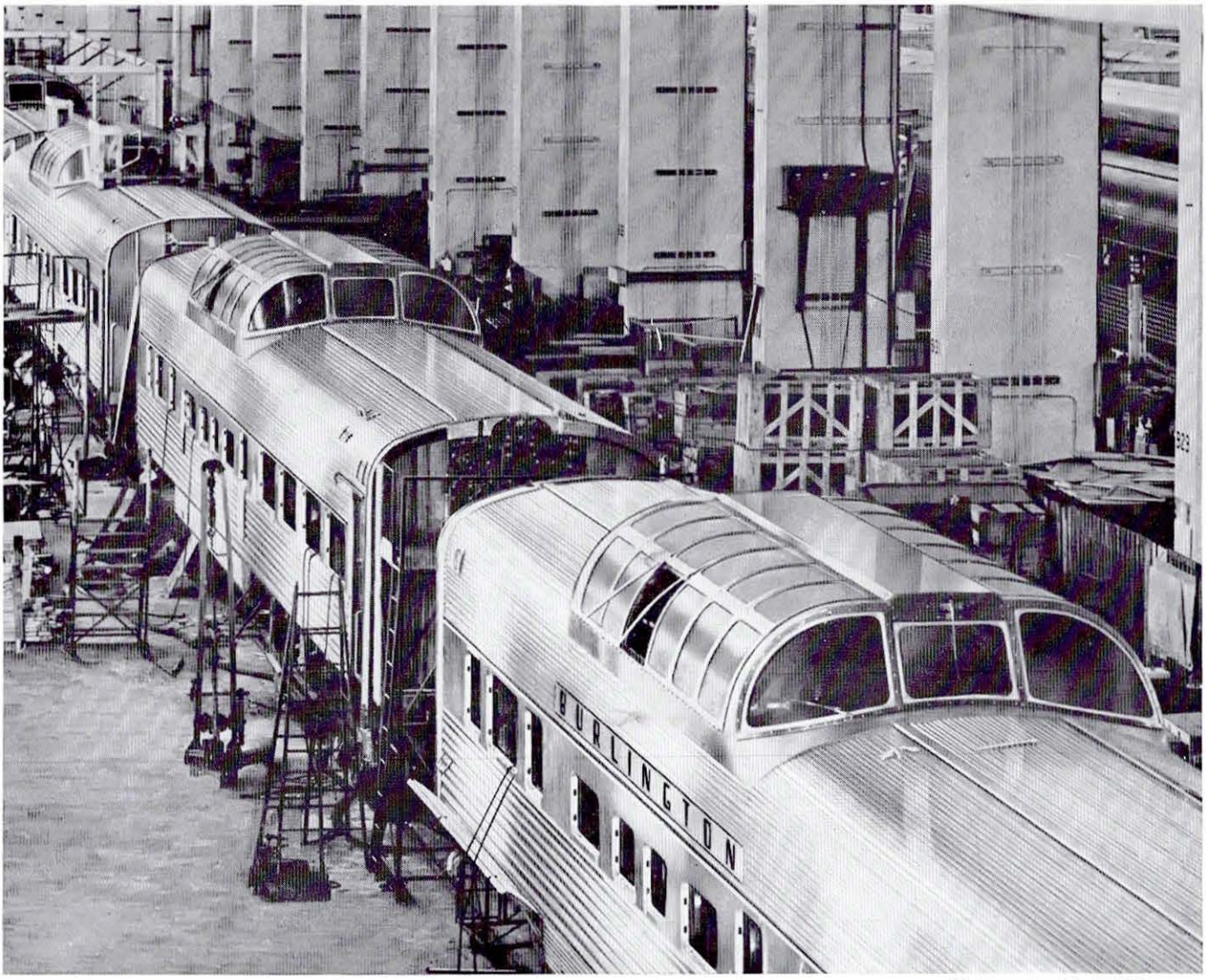

Photo courtesy The Budd Company

From "dome" to sill it's Stainless Steel for strength, beauty and lightness

One word goes a long way in describing the durable construction and attractive appearance of the modern "Vista-Domes" pictured here on the assembly line.

That word is *stainless*. From frames to roof and sides, the designers of these new passenger cars have made sound and thorough use of this versatile metal.

Corrugated high-tensile ARMCO Stainless Steel sheets increase section-depth, assure a high strength-to-weight ratio for exterior panels and structural parts. They *save weight* without sacrificing strength. Safety and greater economy of operation are made possible.

ARMCO Stainless has many advantages in fabricating, too. It can readily be formed, drawn, welded and machined on regular equipment.

On the road, gleaming ARMCO Stainless is both beautiful and practical. Even when exposed to the most severe weather and travel conditions, it staunchly resists corrosion. Simple cleaning keeps it looking smooth and bright.

Remember, there is a grade or finish of ARMCO Stainless Steel sheets, strip, plates, bars, and angles to meet every railroad requirement. For complete information get in touch with our nearest district office or write The American Rolling Mill Co., 251 Curtis St., Middletown, Ohio. Export: The Armco International Corporation.

ARMCO STAINLESS STEELS

ARMCO

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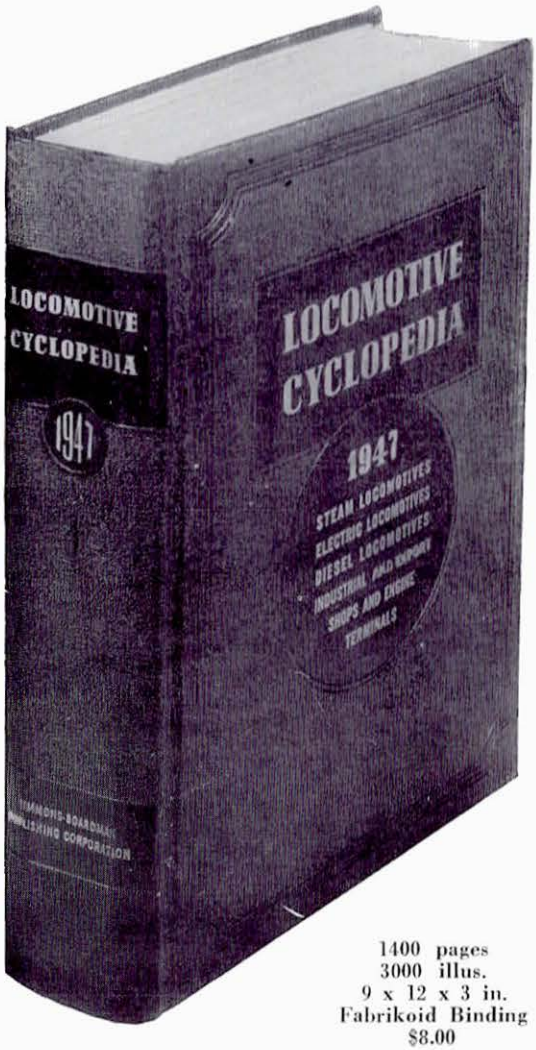
of American Practice

Thirteenth Edition



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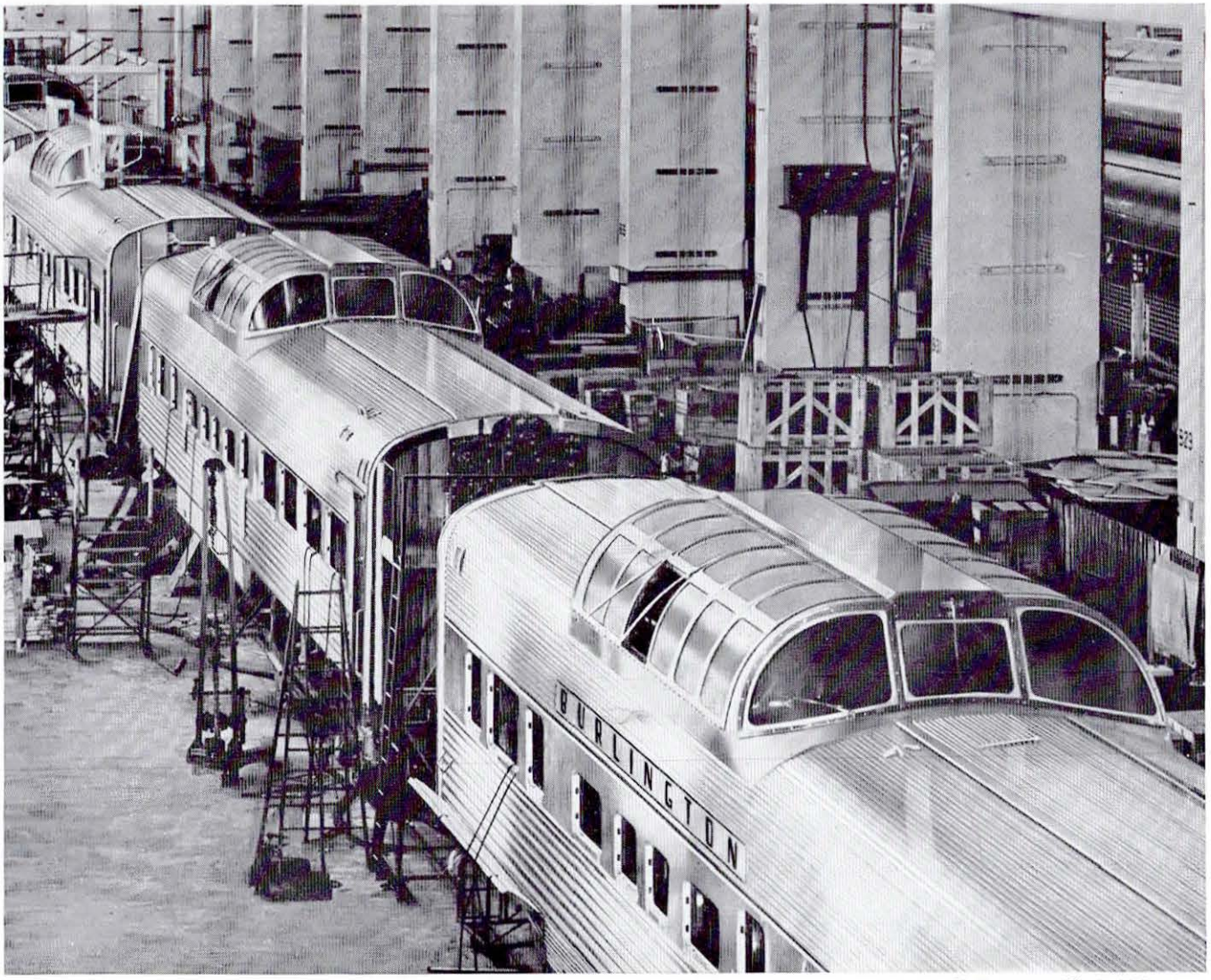

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ARMCO STAINLESS STEELS

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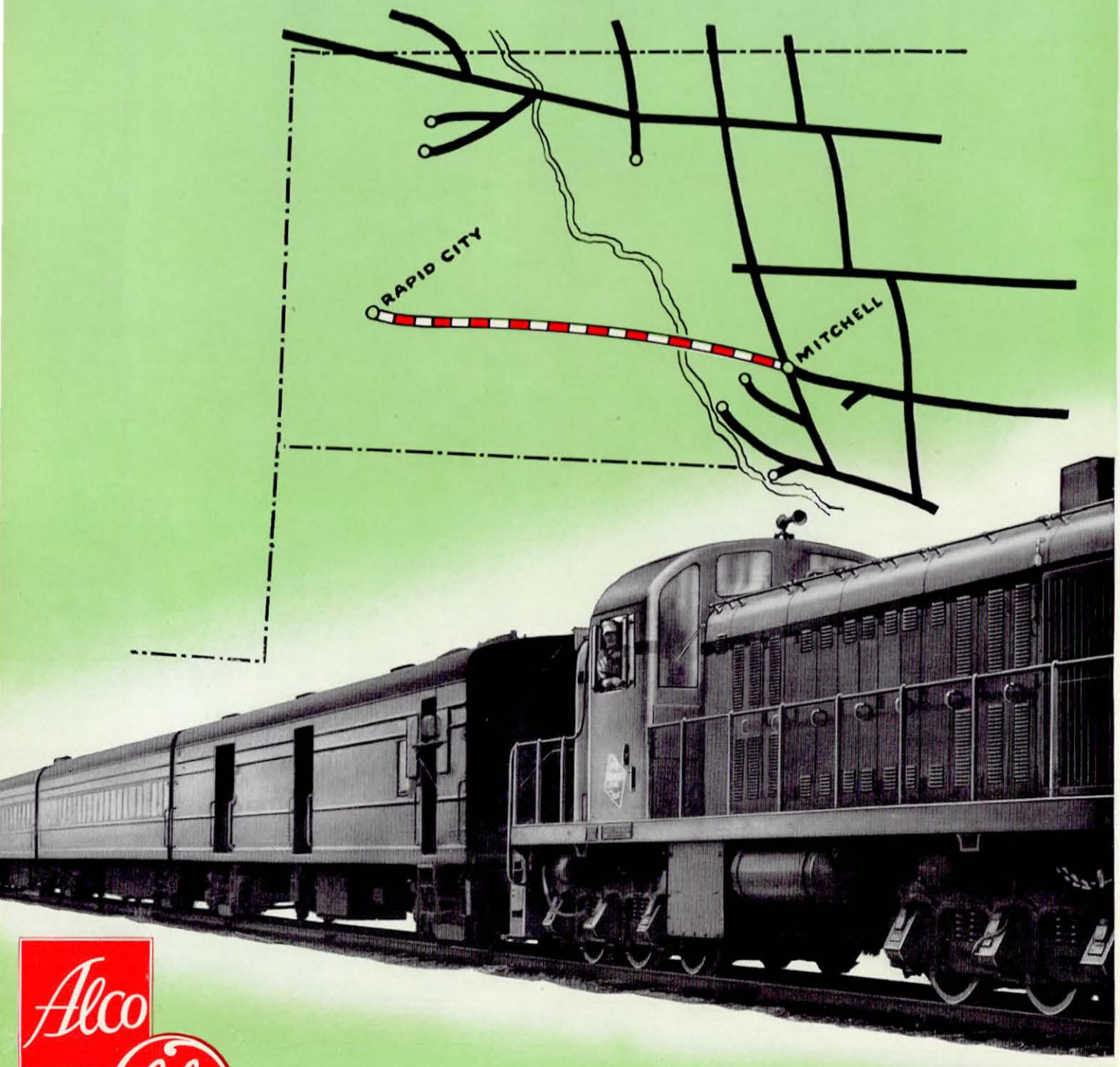
THE MILWAUKEE ROAD



Alco GE

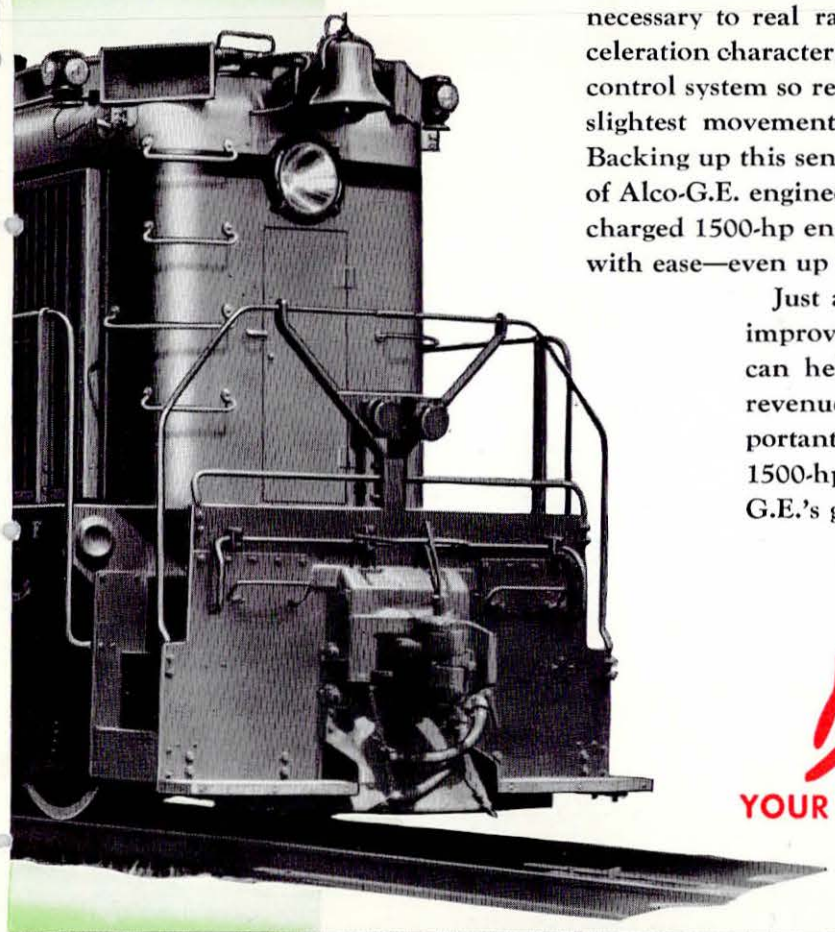
AMERICAN LOCOMOTIVE

CUTS RUNNING TIME

When Alco-G.E. Road Switchers Reduce 286-mile Run by 30 Minutes

The Chicago, Milwaukee, St. Paul and Pacific Railroad's 286-mile Rapid City–Mitchell, South Dakota, run includes twenty-one station stops. In order to maintain a fast competitive schedule, extremely rapid motive-power acceleration is required. The Milwaukee Road's new Alco-G.E. 1500-hp road switching diesel-electrics have proved their acceleration and running characteristics so well that one-half hour has been cut from the westbound, and twenty-five minutes from the eastbound run.

This fact illustrates again that sound research and progressive design result in the extra motive-power performance necessary to real railroad progress. To obtain this fine acceleration characteristic, Alco-G.E. engineers designed a load control system so responsive, so unerringly accurate, that the slightest movement of the throttle brings instant results. Backing up this sensitive control system is another product of Alco-G.E. engineering skill—a single 4-cycle, turbosupercharged 1500-hp engine that furnishes its full-rated 1500-hp with ease—even up to altitudes of 8000 feet!



Just as Alco-G.E. diesel-electrics have helped improve the Milwaukee Road's operations, they can help you improve your service, build up revenues. Faster acceleration is only one important new feature of their design. And the 1500-hp road switcher is only one of Alco-G.E.'s great new line of diesel-electrics.

Built TO INCREASE
YOUR RAILROAD'S EARNING POWER

and GENERAL ELECTRIC

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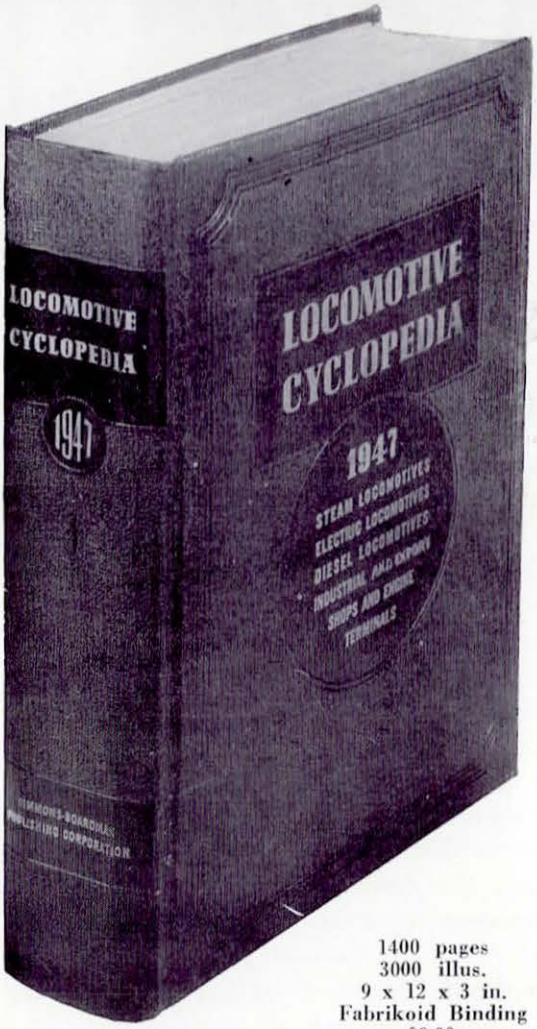

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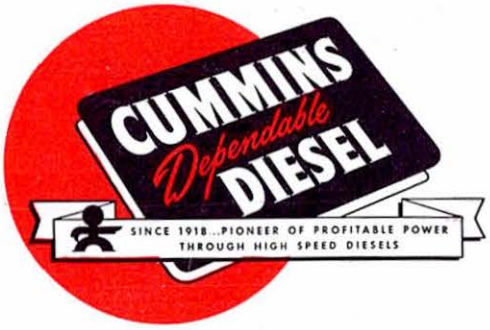

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- **Multiply piston ring life by 300% or more**
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*PORUS-KROME is dense, hard, wear and corrosion-resistant chromium applied by the exclusive Van der Horst process which gives working surfaces an infinite number of tiny oil-retaining reservoirs for perfected lubrication.

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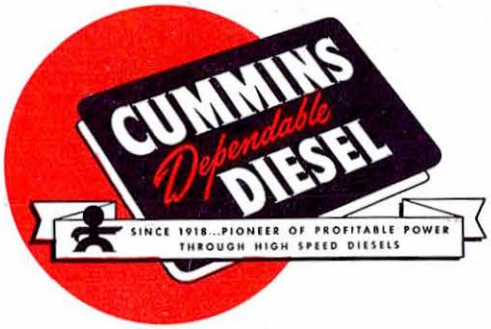

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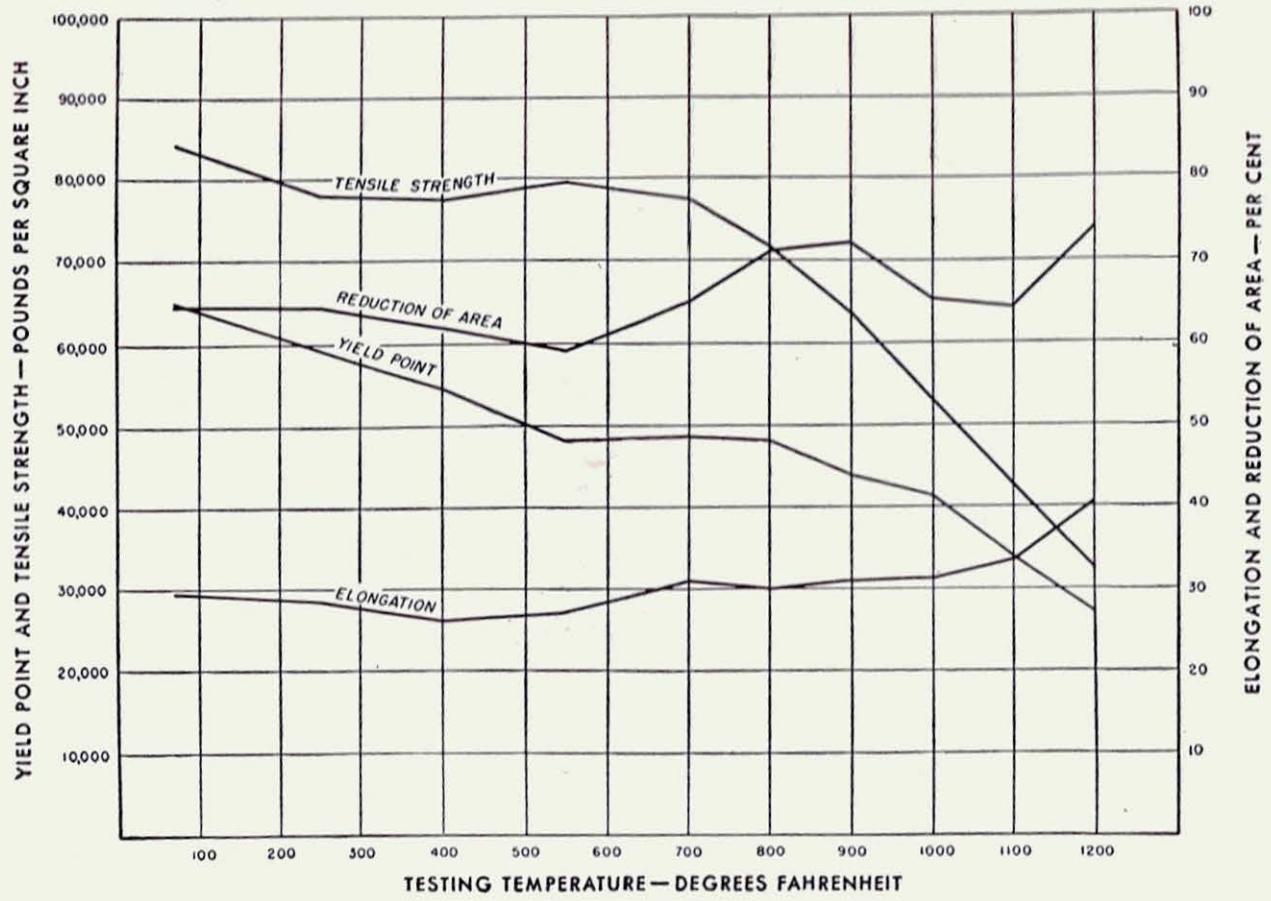

Short Time Tensile Properties of Manganese-Vanadium Plate Steel at Elevated Temperatures.

(Average of 9 Heats)

High temperature properties of Manganese-Vanadium Steel Plate

IN PLATE STEEL for boiler construction, ability to maintain ductility throughout the temperature range customarily experienced in high pressure boilers is a notable achievement.

The above chart indicates that Manganese-Vanadium plate steel meets this requirement to a superlative degree. Representing closely-agreeing results obtained on 9 commercial heats of this type of steel, made to ASTM Spec. A 225-46, it displays in striking manner the excellent ductility in that temperature range ordinarily referred to as "blue brittle."

The hazardous embrittlement which occurs when firebox plate of ordinary steels is heated through this temperature range is of great concern to both designing engineers and operators of locomotive boilers. The satisfactory service record of Manganese-Vanadium steel plate in a number of locomotive boiler applications, under a wide variety of operating conditions, is a practical demonstration that its mechanical properties are adequate for successful locomotive boiler operation at elevated temperatures.

Our metallurgical engineers have had considerable experience in this field, and will be glad to help you obtain the maximum benefit from the use of Manganese-Vanadium steel.

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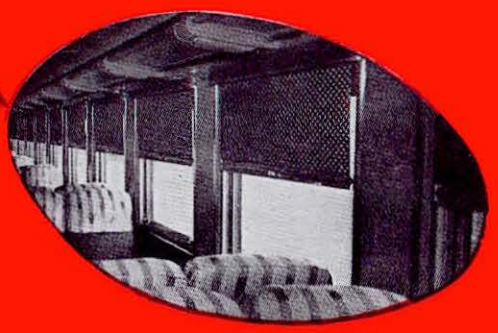

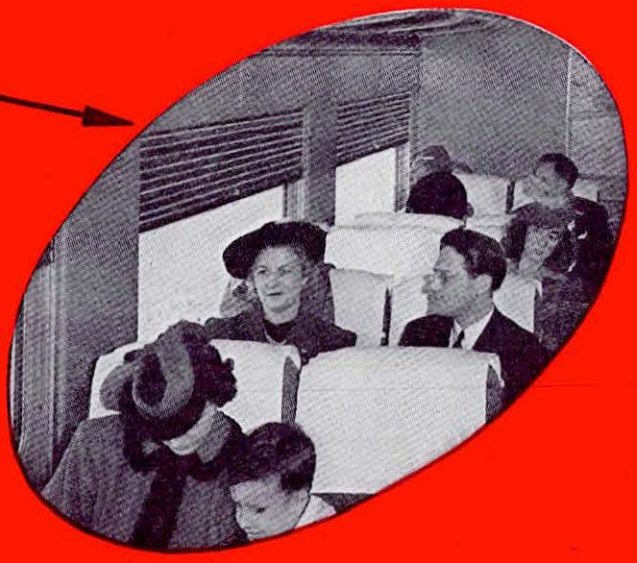

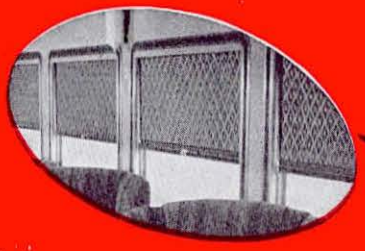

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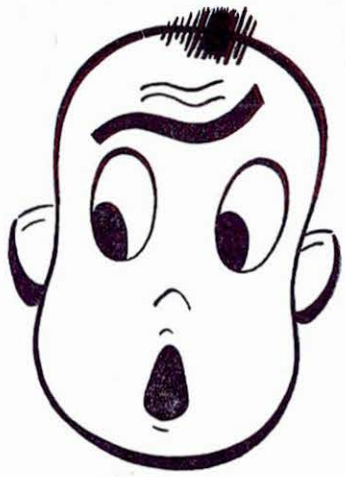

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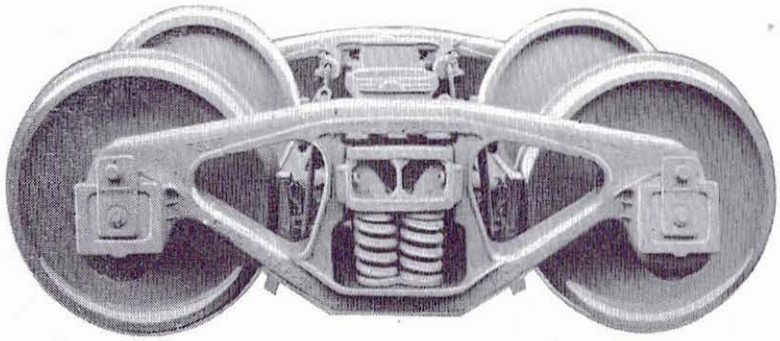

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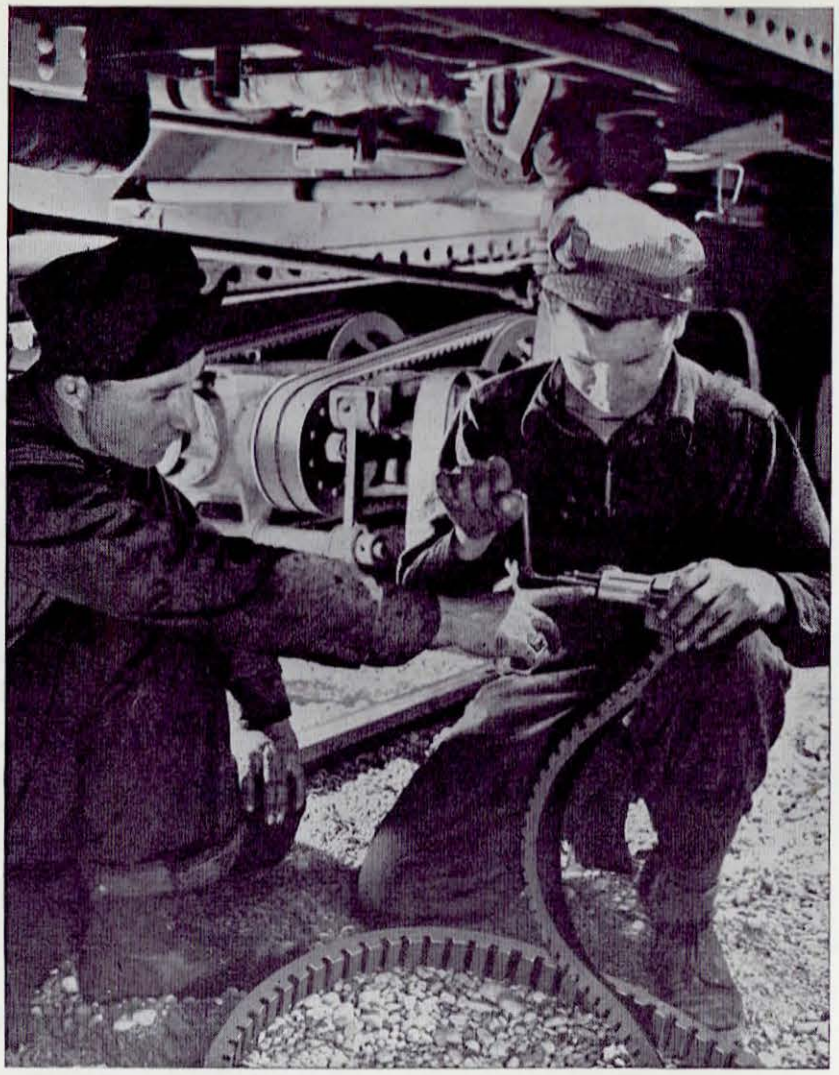

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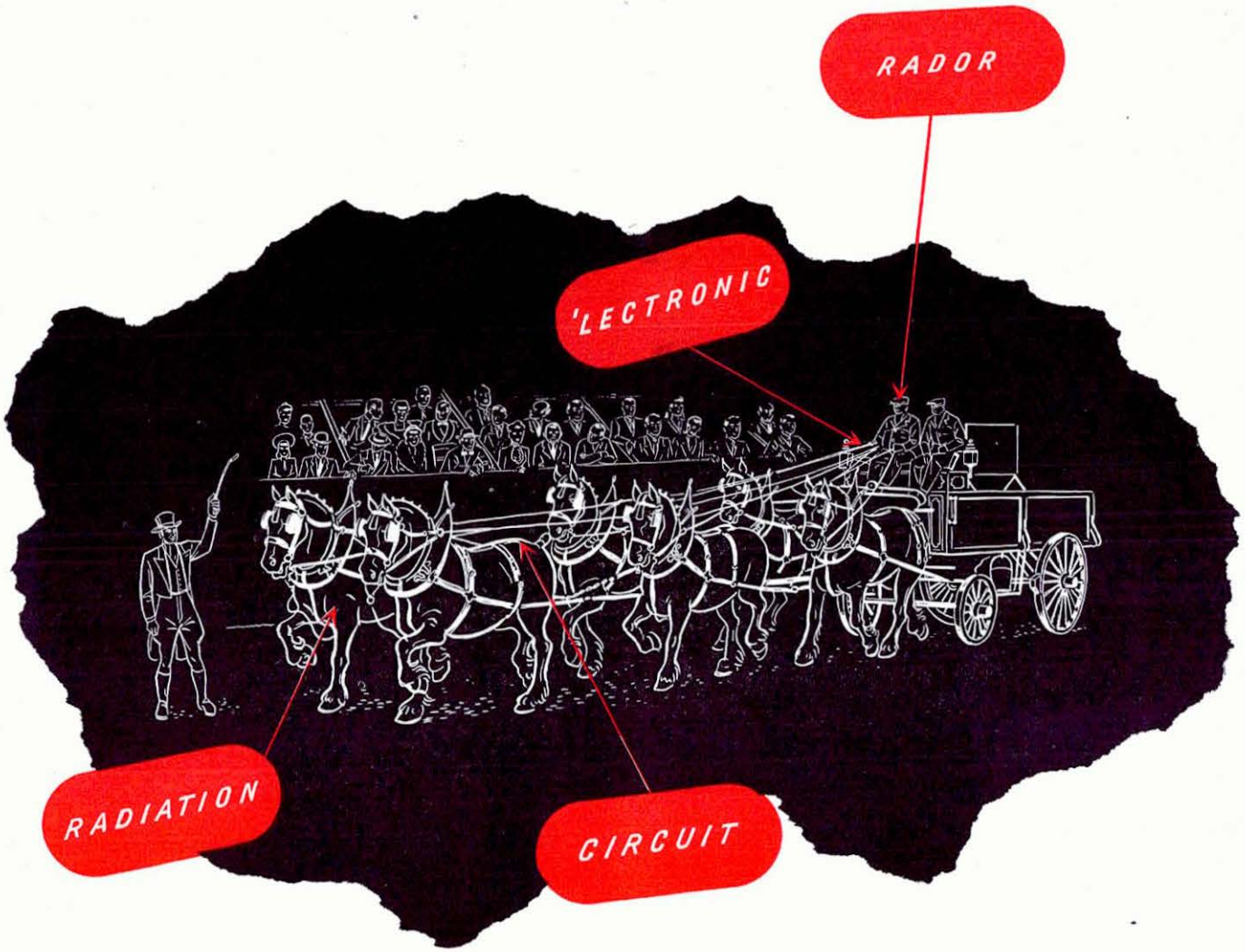

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RECLAIM YOUR DIESEL CYLINDER LINERS with PORUS-KROME!*

TO

- **Lengthen cylinder liner life by 400% or more**
- **Multiply piston ring life by 300% or more**
- **Eliminate stocks of oversize liners, pistons, rings**
- **Reduce your maintenance costs**
- **Increase Diesel availability still further**

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Before you oversize another liner—write for full information about PORUS-KROME! And—for new Diesel locomotives—ask for the names of leading builders who now incorporate PORUS-KROME as standard equipment.

* * *

*PORUS-KROME is dense, hard, wear and corrosion-resistant chromium applied by the exclusive Van der Horst process which gives working surfaces an infinite number of tiny oil-retaining reservoirs for perfected lubrication.

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Good for the Life of your Engines

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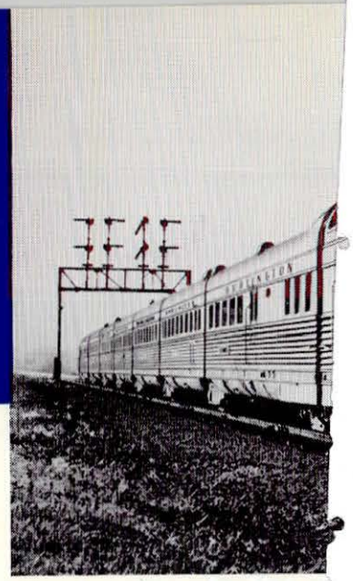

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From main line runs to yard switching—Harrison radiators are helping Diesel locomotives establish their great record of availability.

These sturdy cooling units "put heat in its place"... safeguard performance, reduce maintenance. They're rugged. They're reliable. They're built for effective temperature control under all operating conditions.

The *hundreds of millions of miles* rolled up by Harrison-cooled Diesel locomotives are proof of Harrison dependability. Harrison radiators are part of motive power at its best —Diesel units that haul more tons more miles, in less time at less cost.

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The soundness of design and artistic conception of Budd feature cars, exemplified by this tavern-lounge, keeps them always young.

LIFETIME MAINTENANCE COST OF A

Between them, they've traveled a distance greater than 240 trips around the world—but they've still got that new look.

IN THEIR eleven-year life the Burlington Zephyrs, Nos. 9904 and 9905, have traveled more than three million miles each. Judged by average train mileage, that is equivalent to forty years' service.

When these two trains came off the Chicago-St. Paul-Minneapolis run last fall the Burlington did a beautiful job of refurbishing and redecorating them.

Christened with a proud, new, blue ribbon name—Nebraska Zephyrs—they're now operating on the Burlington's main line on one of the most competitive runs in the country—Chicago-Omaha-Lincoln.

Mechanically they are perfect. In appearance, appointments and luxury they are equal to the newest post-war trains. Maintenance continues "far below average."

The quality that was built into these Twins at the start is still paying off. The trains Budd builds just don't grow old. That's one of the extra dividends a railroad gets for the slightly higher original investment in Budd all-stainless steel equipment.

The only thing old-fashioned in this beautiful diner is the excellence of the food and the service provided by the Burlington Lines.

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RAILROAD CAR EXCEEDS ITS PURCHASE PRICE

HARRISON *Cooling*

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From main line runs to yard switching—Harrison radiators are helping Diesel locomotives establish their great record of availability.

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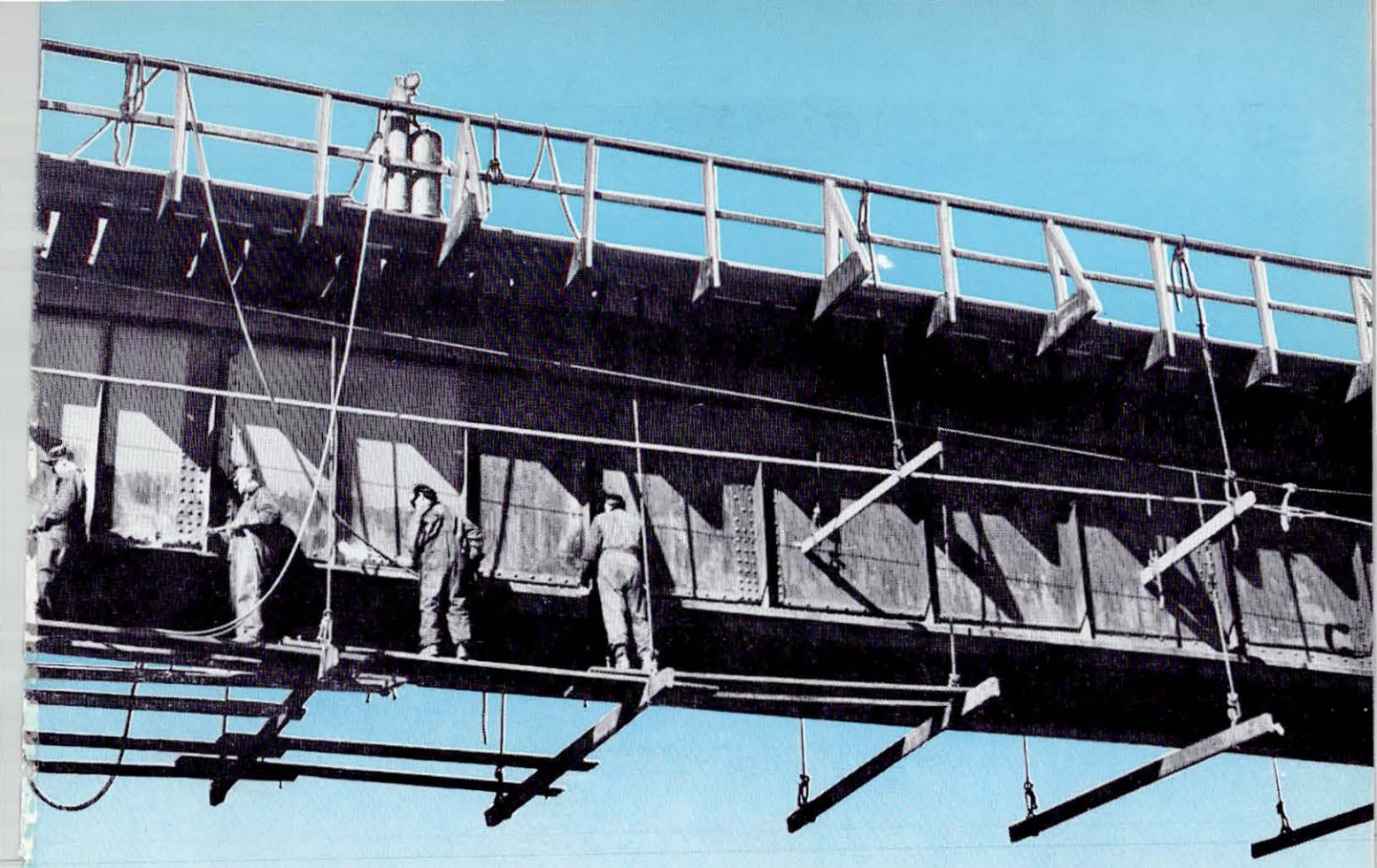
HARRISON

RADIATORS • OIL COOLERS FOR DIESELS

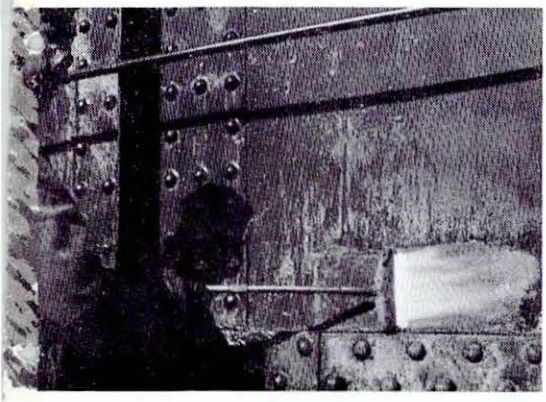
HARRISON RADIATOR DIVISION OF GENERAL MOTORS CORPORATION, LOCKPORT, N. Y.



Flame-Cleaning

BEATS THE WEATHER

Do you know why your bridge paint gangs don't start work earlier in the spring and operate later in the fall? Have you ever stopped to count the lost hours because it was impossible, even in mid-summer, to paint damp surfaces? The answer to these problems is oxy-acetylene flame-cleaning.



Flame-cleaning makes it possible for your paint gangs to work on steel surfaces efficiently and economically even during the cold, damp days of early spring and late fall. And with flame-cleaning, your gangs put in a "full day" because they are not delayed by waiting for the sun to warm up and dry off surfaces.

BRIDGE AND MAINTENANCE ENGINEERS should write for Booklet F. which tells how the flame-cleaning of bridges will save money for your railroad.

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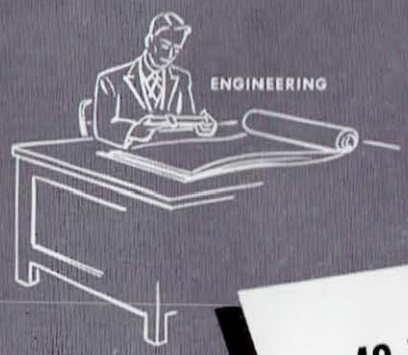

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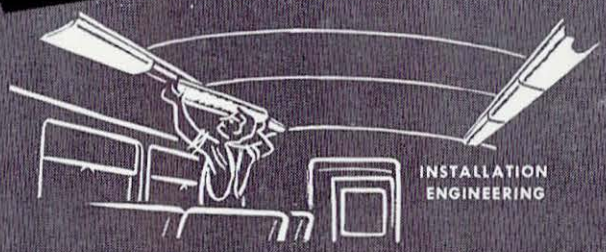
For further information about Keystone Lighting write for our latest catalog.



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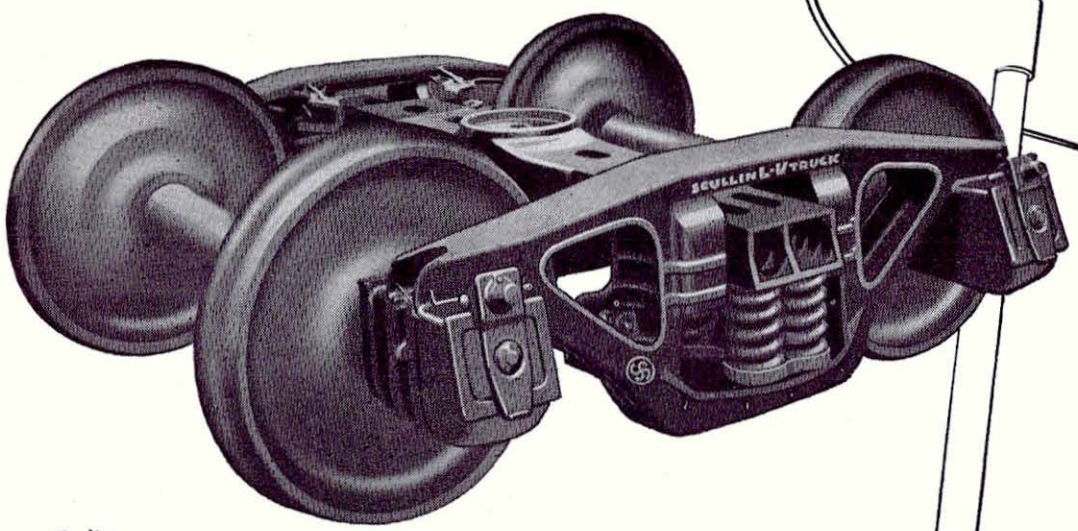
SWITCH TO THE SCULLIN L-V TRUCK . . .

LATERAL VERTICAL CUSHIONED MOTION

for smoother, safer, faster freight

Lading, cars and track all benefit from the gentle "Pullman" ride freight gets on Scullin L-V Trucks. Destructive bounce and sidesway are completely cushioned . . . at all speeds . . . under any conditions. Yet L-V Trucks are comparable to conventional types in price, weight and maintenance cost. Ask the roads that run them!



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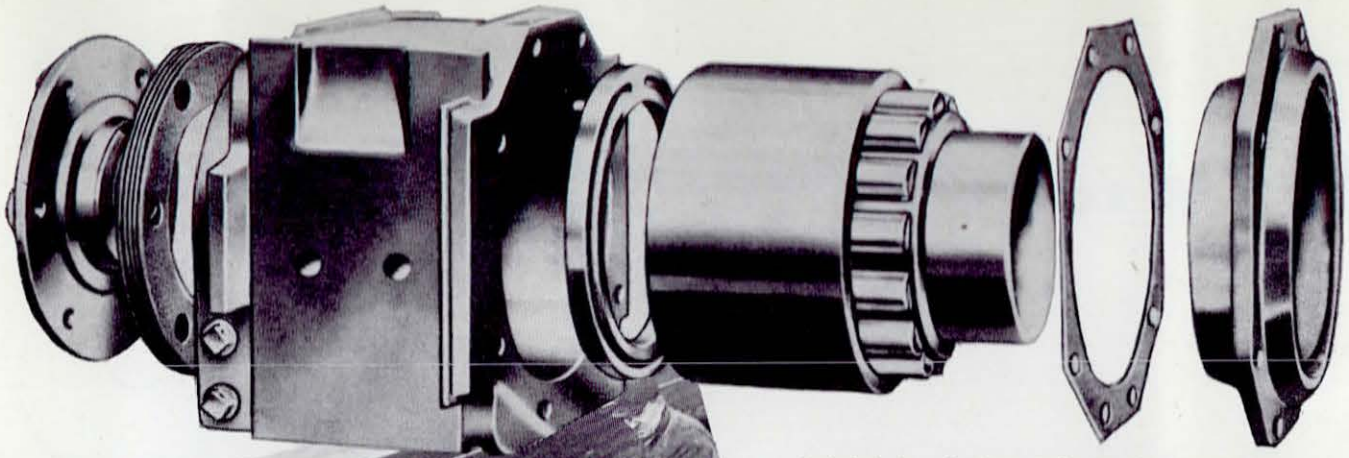

Exploded view of a Hyatt Roller Bearing Journal Box showing the practical, rugged simplicity of its component parts.

Railroad workmen removing a Hyatt Roller Bearing Journal Box from a car journal by hand. No special tools are necessary.

For a quick inspection or complete overhaul

"it's easier with Hyatts"

To keep your journal box maintenance costs to a minimum, specify Hyatt Journal Boxes. They are designed to make your maintenance job easier. They are constructed so that you can remove them from car journals by hand. Once removed they can be inspected easily and immediately reapplied to spare axle sets equipped with Hyatt inner races.

When more complete cleaning and inspection is desired, Hyatt Journal Boxes and Bearings can be quickly and completely dismantled right down to the individual rollers. No special tools are required.

Whether it's regular preventative maintenance or a complete inspection – shop men know that "It's easier with Hyatts."

For additional reasons why "It's easier with Hyatts" write for our Passenger Car Maintenance Film Booklet. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

HYATT ROLLER BEARING JOURNAL BOXES

Vol. 124, No. 17 April 24, 1948

RAILWAY AGE

With which are incorporated the Railway Review, the Railway Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office.

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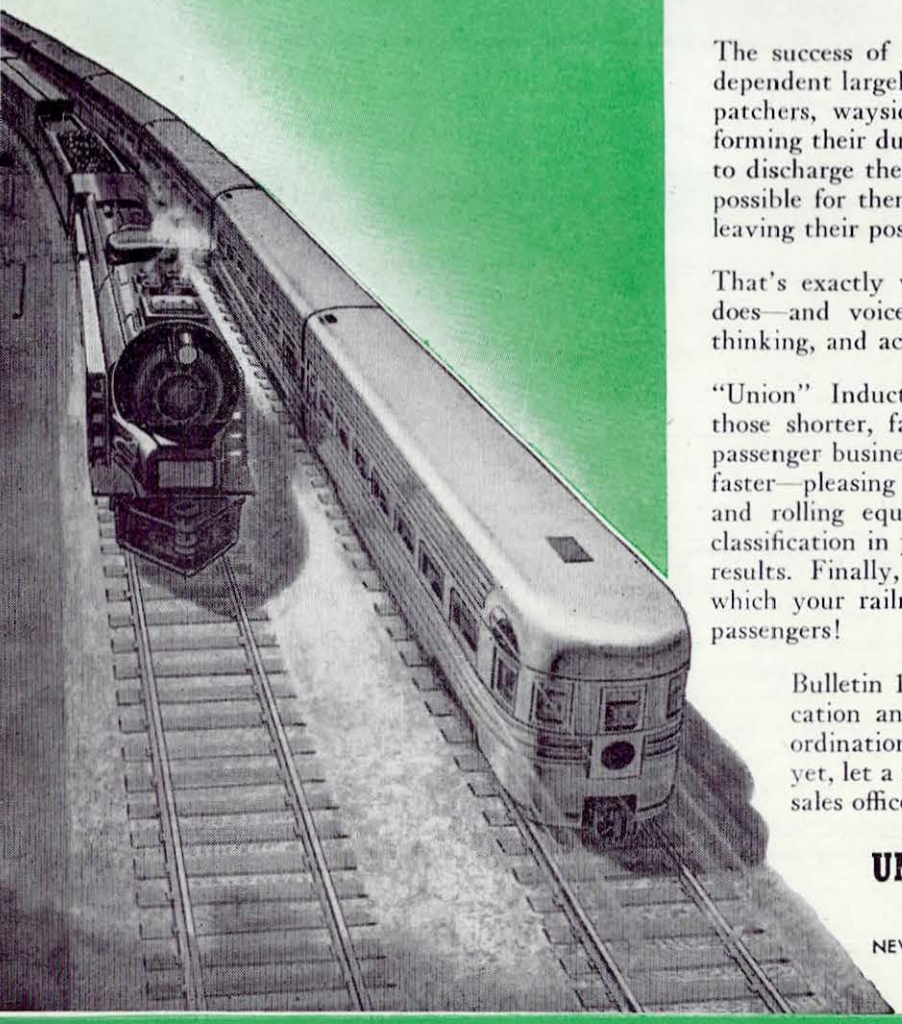

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WEEK AT A GLANCE

READY TO SPEND $1.3 BILLION: The railroads plan to spend about 60 per cent more for equipment and permanent improvements in 1948 than they did in 1947 (a record year), according to estimates compiled by the Interstate Commerce Commission, and outlined in the article on page 58 herein.

FARICY FOR A FINISH FIGHT: The president of Association of American Railroads, in a forthright declaration of policy this week (reported in our news pages), has served notice on the brothers that the railroads cannot—and in their employees' interest should not—give in, with mere perfunctory opposition, to the so-called third-round wage rise demands just promulgated by the non-ops. There has to be an end to the appeasement technique at some time, and it is his conviction that there is no profit to anybody in postponing the showdown.

PERFECTING THE POLICY: Last week the House interstate commerce committee devoted three days to hearings in the general investigation of the national transportation policy inaugurated by Representative Lea of California, which is being continued to develop a basis for modernizing and improving that policy as formally expressed by Congress. The views of spokesmen for the Transportation Association of America, the Association of American Railroads, the commercial air lines, the bus lines, truckers, forwarders, ocean ship lines, and organizations of large shippers all were put into the record to supplement written statements filed earlier. As indicated in our digest of the proceedings in this issue's news columns, all of these interests save one were in substantial agreement as to the desirability of unifying the federal regulatory functions affecting transportation in a single agency independent of the executive branch of the government. The exception, of course, is the air lines, consistent in their bitter opposition to any move that might deprive them of the competitive advantage of a special set-up to promote their interests at the taxpayers' expense.

SUITABLE SMALL STATIONS: One of our illustrated articles tells what the Seaboard Air Line has done to improve the appearance and utility of two passenger stations in relatively small but important Florida towns, in one case by putting up a new building in a more appropriate location and in the other by enlarging and systematizing the facilities of an existing 20-year-old structure.

RATES UP AGAIN: Another "interim" increase in railroad freight rates was authorized this week by the Interstate Commerce Commission. Details are set forth in the article on page 42. Roads in Official territory get a larger relative increase, the South gets a small one, and most of the West gets none, except on specified commodities. The net gain, on an annual basis at last year's traffic levels, would be $300 million over current rates. The commission's willingness to act relatively promptly on discovering the railroad's acute need for more income to maintain their credit and pay for betterments is encouraging, and, as A.A.R. President Faricy says, it raises hopes for an adequate permanent increase. But the commission's surprise that the winter weather was bad—that there was a strike in the coal mines, and that the carriers' cash position has been affected by their ever-growing wage bill—is not so promising. Commissioner Mitchell may not be alone in believing that there is "no good reason" for putting off once more a determination of the amount of the permanent increase.

GAMBLING WITH DESTINY: The leaders of the railroad brotherhoods continue to adhere to a simple policy which steadily serves *them* well—though there is room for debate as to whether their followers who work on the railroads have been equally benefitted. That policy is to demand more and more pay for less and less work. It is possible for the railroads, or any industry, to meet such demands superficially under some conditions (as when money becomes cheaper), our leading editorial points out, but it is possible for an employer to pay more *real* wages only (1) if its employees' productivity is increased at least proportionately, or (2) if the employer can pass the cost increment along to the other contributors to the national income pool. If a complaisant government permits unions by brute force to exact more pay without doing more work in return, the ability of the industry to provide employment is jeopardized and its chances of survival in a highly competitive economy are injured. Neither result is, in the long run, particularly rewarding to the men who pay the union bosses' salaries.

AN OLD TRIBULATION: Railroads buy better locomotives and larger cars, install centralized traffic control and retarders and new communication facilities, and rebuild their tracks and yards, all with the idea of producing better transportation at lower cost. But Robert Schey, superintendent of the Nickel Plate's car department, has just hammered home again the fundamental fact that the advantages of all of these measures can be nullified by train delays resulting from hot boxes. His comments form an article in this issue (page 54).

FRENCH FREIGHT RATES: Up to 1944 the French government railroads charged freight rates largely the result of rule-of-thumb applications of the what-the-traffic-will-bear principle. Now mathematics has been brought into the picture, and a completely revised basis of charges and classification reflects the relationships between the value of commodities and the cost of transporting them. One significant result of the institution of the new rate-making technique is the elimination of situations in which traffic is handled at an out-of-pocket loss. This new development is surveyed in an article this week (page 46) by G. Lloyd Wilson, the University of Pennsylvania's distinguished professor of transportation and public utilities.

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MORE PAY FOR LESS WORK

The railroad employees who are seeking large increases in wage rates per hour and a reduction in their hours per week—cutting down the amount of useful work turned out per employee—would find it a profitable exercise to reflect on what their chances are of "making it stick" if they should succeed in winning, on paper, the objectives they are striving for. If, in due course, the weekly hours are limited to 40 with a large increase in rates per hour with prohibitive penalties for Saturday, Sunday and holiday work—can these employees expect that their situation will actually be improved by such a victory?

Products, Not Dollars, the Criterion

No American ought to lose sight of the fact that our country is trying to avoid another war and that this program is going to take a lot of agricultural products and manufactured goods which, otherwise, Americans themselves might consume. If the rearmament and European relief programs are considered, not in terms of paper dollars but in terms of the physical quantities of goods they will require, then it will be easier to understand that the American people are going to have to produce more or be content to consume less. If, for example, annual automobile production totals 4,000,000 and 10 per cent of that production, or 400,000 vehicles, are to be sent to Europe or used for military purposes—then American consumers must either (1) get along with 400,000 fewer automobiles or (2) persuade the people who make automobiles to find some way of producing 4,400,000 units instead of only 4,000,000.

In point of fact, more is needed than just an increase of 400,000 automobiles—because that would only retain the *status quo*. If the standard of living is to rise instead of standing still, production *per average individual worker* must increase enough to produce (1) his quota of all the supplies which are going to be sent to Europe or used for military rearmament *plus* (2) his share of the additional goods needed to raise the average American's living standard.

It was possible for wages to keep going up during the war because rationing kept people from spending all they earned, and the purchase of war bonds absorbed the surplus. If labor would take its pay increases in government bonds and agree never to cash them in, present demands for increased wages with easier hours might be conceded—but neither bonds nor paper money are any good unless they can be exchanged for something useful. If there are to be more automobiles, more hams, more suits of clothes, more freight cars, more railroad transportation for each American to enjoy—at the very time we are increasing our gifts of all these things to Europe and are increasing our use of them for mili-

tary purposes—then the only way such larger supplies of these good things are going to be available is for all of us to contribute to the production of more of them.

When railway employees ask for an increase in wages—that is, *real* wages (measured not just in money but in the things the money will buy)—what they are asking in effect is that builders work a little harder to produce more housing; that farmers raise more hogs and cattle; that automobile manufacturers produce more automobiles, and the clothing industry produce more clothes—all to provide the increase in *real* wages the railroad employees demand. This is a fair request *provided* each railroad employee, in turn, will agree to produce more railroad transportation for the house builders, for the farmers, and for the manufacturers, in exchange for the increase in products he wants all these other people to provide for *him*.

The International Impact

When wage increases are granted on any other basis than that of a reward for increased production they are either (1) a monopolistic hold-up, where a favored group preys on everybody else or (2) just a deceptive hand-out of paper money, which does not buy any more than a smaller amount did before. Wage increase demands based on decreased individual production must make Joe Stalin smile—because nothing we could do could so encourage him to believe that the people of a free republic are too dumb to prevent their system from falling apart in competition with his dictatorship. Since Joe does all the thinking for the Russians, he doesn't have to have citizens willing to do a little thinking in order to keep his system working. Ours can't work without them.

HOT-BOX DATA

When the Mechanical Division of the Association of American Railroads discontinued two years ago the monthly report on freight-car hot-box data it eliminated one of the measuring sticks used by a car department in determining whether its hot-box record was good or bad. It also removed an incentive—competition—for improving the record.

The discontinued report presented data giving the freight-car miles, the number of cars set out because of hot boxes, and the freight-car miles per hot box for each reporting railroad. It was possible for any railroad to select from this report the hot-box data of railroads with operating conditions similar to its own and use these data for making a comparison with its own hot-box performance. Some car departments made a regular report every month to their respective managements which showed this comparison. This report served two purposes. It gave management a good idea of the relative efficiency of its car department in combating one of the outstanding plagues of railroad

MR. METZMAN'S FAITH

The only way the railroads can hope to enjoy adequate earnings is to be allowed, just as other industry is allowed, to adjust the price of their service to the cost of producing it. Only in such a way can the railroads pay private capital a living wage and thus provide the quality and quantity of transportation service which the public demands and rightly expects.

I have faith in the ability of the railroads to continue as a vital, pulsating part of our expanding economy. I have faith in their capacity to meet their ever-increased responsibilities as the nation's basic transportation system. And I have faith in the intelligent self-interest and inherent fairness of the American people to see that they are permitted to continue as a vigorous part of our free enterprise system. Only in such a way can the railroads hope to meet the production demands of a growing nation. And only in such a way can they hope to maintain their strength as mighty defense lines against any emergency.

It is in that faith that the railroads face the future. Today despite production records all along the line; despite the highest standard of living of any nation; despite the largest national income in our history; despite all these, there are still those who face the future despondent and fearful. They think they see storm clouds gathering on the economic horizon; they fear they will burst wide open and drown them in a deluge of economic disaster; they fear another depression; a third world war; an atomic bomb.

None of these do I discount; I am too much of a realist not to be aware of the obstacles that may lie in our path. But with faith in our country, in ourselves, and in our work, we can turn stumbling blocks into stepping stones of progress. Let us not forget that skillful pilots gain their reputation from storms and tempests. The great challenge today is to face the future unafraid. By our own fear we can become the instrument of our own disaster. But by our own strength we can dissipate fear.

America's strength is bound up with its tremendous capacity to produce under a free economy. The great need today is for increased production, individually and collectively. If we keep our eyes straight ahead on our objective —*increased production*—we shall overcome many of the problems confronting us today. Indeed, work, production and distribution, under our free economy, are the foundation of America's strength. The trouble right now is that few seem inclined to want to work. We will reach our objective only as each and every one of us takes off his coat, rolls up his sleeves and goes to work. There are few, if any, substitutes for hard work.

The power of American production then will be felt, just as it was during the war, in every corner of the earth, and its strength will be as a mighty force for the protection of our national security and the preservation of our free institutions. As the wartime governor of Michigan said in a message to the legislature in 1863, over eighty-five years ago: "The true glory of the Republic must consist. not only in the beneficence and freedom of our institutions, but also in our ability and courage to defend and protect them."

—From an address to the Lansing, Mich., Lion's Club by Gustav Metzman, president of the New York Central.

operation. It was an incentive for the railroad with the best record to strive to maintain its position and for the others to improve their records by stepping up their car maintenance and inspection work.

The A.A.R. report for January, 1946, showed a total of 7,970 cars set out because of hot boxes by the 119 reporting railroads. An estimate made in 1944 of the direct costs involved in setting out one car for a hot box ranged between $34.43 and $56.53, depending on variables affecting the repair costs. The estimate did not include any losses resulting from delayed train arrivals and claims for damage to ladings and perishable freight. Using a conservative 1948 average cost of $50.00 per car the cars set out in January, 1946, represented a direct loss of $398,500 to the railroads.

The losses due to hot boxes are so large that consideration should be given to re-establishing the hot-box report because it makes possible the injection of a factor of inter-railroad competition as an incentive for reducing these losses.

UNIT LOADS AND BETTER SHIPPING

Stores departments of railroads handle a great amount of freight of all sorts and have profited from the use of unit loads and pallets. Some stores department representatives have even gone into suppliers' plants to demonstrate how shipping in unit loads and by the pallet method could also save the shippers money. In addition to other savings, both the shippers and the receivers of freight have benefited because of the very considerable reduction in loss and damage when freight is shipped in this way.

In the light of the savings to the railroads in loss and damage curtailment and the possible reduction in claims department staffs, some manufacturers and shippers have exhibited a desire to participate to a greater extent in the savings. This participation could take the form of some allowance for pallets under load or a lower freight rate on the return of empty pallets. Their feeling is reflected in a recent poll of the membership of the National Industrial Traffic League, which revealed that about 58 per cent of those answering a questionnaire considered either that the railroads should transport pallets free of charge or that pallets should be considered as dunnage in the loaded movement. (Twenty-two per cent favored the dunnage allowance and 36 per cent free movement.) The same poll revealed that 85 per cent of those replying thought that the pallets should be returned at reduced rates. Incidentally, 32 per cent of those who replied to the questionnaire indicated that they used pallets in transportation.

It would appear that more critical study and consideration might be given to this question, in the exploration of means for improvement of service.

INGENUITY HELPS IN REBUILDING BRIDGES

Advances in the technique of bridge reconstruction appear to be lending increased practicability to the plan of renewing girder bridges, and possibly even truss spans, on the same alinement. Where such a plan can be carried out without undue interference with traffic it frequently is much less costly than reconstructing the bridge on a different alinement, in which case the outlay is invariably augmented by the cost of line-changes at the ends.

Instances are often encountered where bridge substructures are adequate to carry present-day loads, although the superstructures must be replaced with spans of a higher load rating. In such cases it is a relatively simple matter, where the spans are of the girder type, to change them out on the same alinement without excessive interference with traffic. But where the substructure, for one reason or another, must be replaced, the problem involved in reconstructing the bridge on the existing alinement may be greatly complicated, especially if foundation piles must be driven. The driving of such piles "through" the deck of the existing bridge by on-track equipment is at best a difficult operation, involving much loss of time to avoid delays to trains.

This problem has been greatly simplified by the introduction in recent years of several types of steel bearing piles which may be driven in sections underneath the existing superstructure, the sections being joined by welding as they are driven. By this means, using floating or crawler-mounted equipment, piles may be driven under conditions of limited headroom, permitting the new piers to be built without occupying, or otherwise interfering with, the existing structure. After the piers have been completed the new spans can usually be placed between trains or, at the most, with relatively minor interference with traffic.

An alternate to this procedure was recently employed on the Louisville & Nashville in which each new pier seat was designed as a beam spanning between groups of piles located outside the limits of the existing single-track superstructure, thereby permitting the piles to be driven by floating equipment entirely independent of the old bridge.

Like other engineering problems, those involved in renewing railroad bridges on their existing alinements are frequently found to be relatively simple when examined in a spirit that refuses to acknowledge defeat until every possibility has been explored. A suggested avenue of approach when studying a particular situation is to assume, at least for a time, that there is no alternative but to reconstruct the bridge on its present alinement. Such assumed necessity, abetted by advances in materials, equipment and technique, may prove to be the mother of invention.

ADDS 4 PER CENT TO FREIGHT RATE INCREASE

I.C.C. authorizes second upward adjustment of interim advance in Ex Parte 166, making it a 21.4 per cent boost; annual-basis put at $1,535 million, $300 million more than January adjustment which is supplanted

RAISES HOPES FOR ADEQUATE PERMANENT BOOST—FARICY

Commenting on the Interstate Commerce Commission's latest interim report in Ex Parte 166, William T. Faricy, president of the Association of American Railroads, issued the following statement:

"The freight rate increases authorized by the Interstate Commerce Commission are less than the railroads asked for, and less than they believe to be necessary to bring the prices at which railroad freight service is sold into line with the present-day cost of producing the service. However, the commission's decision recognizes the need of the railroads for additional revenue, and seems to afford ground for hope of further adjustments to put railroad rates on a reasonable level."

Additional freight-rate increases, which will yield approximately $300 million a year, have been authorized by the Interstate Commerce Commission as a further measure of interim relief in the Ex Parte 166 proceeding. The new adjustment will substitute an average overall increase of 21.4 per cent for the increase of slightly more than 17 per cent which became effective January 5 to supplant the first of these interim adjustments—the 8.9 per cent boost which had been in effect from October 13, 1947.

Whereas these two previous increases were uniform throughout the country, the present adjustment will supersede them with a general increase of 30 per cent within Eastern territory, 25 per cent within Southern territory and from, to and within zone 1 of Western territory, and also interterritorially, and 20 per cent within the remainder of Western territory. These general percentage increases are subject to stated limitations as maxima, of which there are now more than in the two previous interim reports.

Upper-Lake Ore Rates Included

Also the present report grants interim relief for the first time with respect to charges for perishable protective services against heat and cold and iron-ore line-haul rates to, and handling charges at, the upper Great Lakes ports. The charges for the protective services may be increased 10 per cent, while the iron-ore rates to the upper Lake ports may be increased 10 cents per net ton and 11 cents per gross ton, and the handling charges at such ports may be increased 18 per cent, the same as the increase approved for such charges at the lower Lake ports.

The report authorizes publication of the increases on 10 days' notice, and railroad traffic men were meeting in Washington, D. C., this week in an endeavor to work out publication details with the idea of making the new rates effective during the first week of May. As the commission's report put it, the increases are to be applied to basic rates and charges after exclusion therefrom of such portion thereof "as represents the interim increases made pursuant to our reports and orders heretofore entered in this proceeding." The new adjustment will remain in effect "until further order of the commission." In this connection the January 5 increase had an expiration date of June 30 "unless sooner terminated by the commission's order on further consideration of the record."

Except for such increases as may apply there on commodities given exceptional treatment, the present report will result in no increase in present rates within Western territory other than zone 1. The general 20 per cent increase approved for application there is the same as that which has been in effect under the January 5 adjustment.

Mitchell Wanted Final Report

The permanent increases sought by the railroads in the proceeding would average approximately 30 per cent overall. With various exceptions, where cents-per-100-lb. increases or maximum limitations on the percentage increases would be specified, it would be 41 per cent within Eastern territory and inter-territorially between that territory and other territories and 31 per cent within and between Southern and Western territories. In this connection, Commissioner Miller filed a brief separate expression, concurring in the present report "so far as increases are allowed"; but saying he also thought that "with few exceptions, the carriers have fully justified and should be allowed substantially all the increases sought."

Another concurring expression came from Commissioner Mitchell, who chided his colleagues for not having made a final report at this time. "I concur in this report because of the very evident need of the railroads for increased revenues at once," Mr. Mitchell said. "This need has been evident for some months, and yet this commission has failed to bring in a report finally determining the amount of the rate increases which the carriers are entitled to. I know of no good reason why the final report should not now be issued; in fact, why it should not have been issued some time ago. The public and the carriers are entitled to an immediate final decision by this commission."

On this matter, the majority report reflected the prevailing commission opinion that more time was required to do the best possible job of adjusting rate relationships; and that, meanwhile, the further interim

relief should be granted in view of adverse trends of railroad traffic and earnings which were not anticipated when the amount of the January 5 adjustment was fixed. "This is both a revenue case and a rate case," the report said. "How great and how difficult is the rate adjustment feature of this proceeding—and how important to the commerce of the country—is, we fear, not generally understood. We must, however, presently deal with the revenue features of the case so as to carry out the intent of Congress to maintain an adequate national transportation system."

There were no dissents to the report, and all members of the commission participated, including Commissioner Johnson who is also director of the Office of Defense Transportation. The report, dated April 13 and made public April 19, was brief, occupying only 9 mimeographed sheets, more than 4 of which were devoted to the 32 formal findings. Most of the latter dealt with rates and charges accorded exceptional treatment. The estimate that the annual-basis yield would be approximately $300 million was made by the commission's staff and given in an explanatory notice by I.C.C. Secretary W. P. Bartel, which was issued along with the decision. By territories, the additional revenue is expected to be divided as follows: Eastern district, $180 million; Pocahontas region, $19 million; Southern region, $42 million; Western district, $58 million.

Up 43 Per Cent Since June, 1946

The additional $300 million will raise the annual-basis yield of these Ex Parte 166 interim increases to $1,535 million above that of the rates in effect prior to the first of such increases, i.e., the October 12, 1947 basis. After setting up that figure, the Bartel notice went on to say: "As the increases allowed in October last were super-imposed upon the increases allowed in the earlier decisions in a similar application by the carriers (Ex Parte 162), effective July 1, 1946, and further increased effective January 1, 1947, the total increases in gross freight revenues of the Class I railroads from June 30, 1946, to and including the increase now authorized, are estimated by the commission's staff as slightly over $2,500 million, or approximately 43 per cent. These figures relate to freight alone, and do not include increases in other operating revenue of the carriers from increases allowed in passenger, mail, compensation for transporting express, and other operating revenues, which for the Class I railroads aggregate about $300 million a year. The commission's staff points out that these estimates are based on the assumption that the states will follow the same general pattern, and that the railroads will again handle the normal amount of traffic."

Among commodities accorded exceptional treatment are lignite coal with authorized increases of 20 cents per net ton or 22 cents per gross ton. These supplant January 5 increases of 10 and 11 cents, respectively. The latter was also the January 5 adjustment of rates on anthracite and bituminous coal and coke which now take the following instead: Where present rates (excluding the previous interim increases) are $1.15 or less per net ton and $1.29 or less per gross ton, 20 cents and 22 cents, respectively; over $1.15 but not over $2.50 per net ton and over $1.29 but not over $2.80 per gross ton, 25 cents and 28 cents, respectively; over $2.50 per net ton and over $2.80 per gross ton, 30 cents and 34 cents, respectively. The general finding as to rail-water rates on coal and coke is that all factors of such rates which are subject to commission jurisdiction shall be considered as a unit and subjected to a single increase. This is followed by a special finding stipulating that rates on coal from Illinois mines to East St. Louis, Ill., and Alton, for movement beyond by barge to points on the upper Mississippi river, may be increased 12 cents per net ton.

Some Adjustments Contemplated

Rates on iron ore, other than those for movements to the upper Lake ports which get the above-mentioned increases of 10 cents per net ton and 11 cents per gross ton, will now take increases limited to 25 cents per net ton and 28 cents per gross ton, these to supplant the January 5 increase of 10 cents per ton, net or gross as rated. The increases in rates on ores and concentrates of aluminum, copper, lead, and zinc, unground manganese ore and chrome ore will be limited to 30 cents per net ton or 34 cents per gross ton. In the January 5 adjustment, a specific increase of 20 cents per ton, net or gross as rated, applied to aluminum, copper, lead and zinc ores and concentrates.

The limitation now imposed with respect to the increase on iron and steel articles is 14 cents per 100 lb. or $2.80 per ton, net or gross as rated. The list of articles to which this finding applies includes knocked-down iron or steel tanks and tank towers and tower material; and in that connection there is a stipulation that the authorization for such increase is conditioned upon a contemporaneous adjustment of the Ex Parte 162 increase in carload rates on the tanks to a maximum of 10 cents per 100 lb.

Limitations prescribed with respect to various of the other commodities accorded exceptional treatment contemplate a similar adjustment of the Ex Parte 162 increase. Meanwhile the finding with respect to the rates on grain (which contains no Ex Parte 162 condition) limits the increase now authorized to 25 per cent within Eastern territory. Other exceptions include those relating to rates on aluminum, copper, lead and zinc metal or alloys, which are treated the same as iron and steel articles; sulphur; Fuller's earth; fertilizer; building blocks, slabs, tile, etc.; and benzene. Also there is a general finding that the limitations set out in the railroads' permanent proposal shall apply with respect to the commodities on that list but not dealt with specifically in the present report's findings. The railroad proposal was outlined in the *Railway Age* of December 6, 1947, page 66.

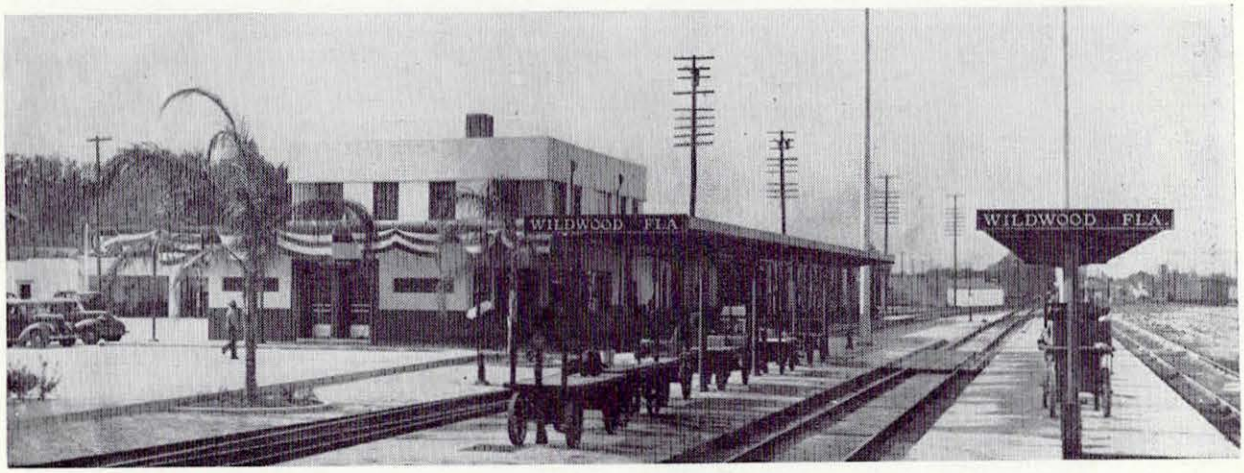
The increases approved for the railroads are approved also for petitioning water carriers, while freight forwarders are advised that they may file tariffs carrying like increases. Another finding authorizes the application of the general percentage increases to rates and charges for the transportation of milk and cream in passenger service.

As indicated above, the commission acted because a "chain of unexpected and unpredictable events"

(*Continued on page* 59)

The new Seaboard station at Wildwood, Fla., is typical of the modern style of architecture to be found in tropical climates. Notice the glass-block panels at the corners of the second floor

The station at Winter Haven, while completely modern, retains the colorful Spanish atmosphere



Track side of the Wildwood station, showing the long concrete platforms

relief should be granted in view of adverse trends of railroad traffic and earnings which were not anticipated when the amount of the January 5 adjustment was fixed. "This is both a revenue case and a rate case," the report said. "How great and how difficult is the rate adjustment feature of this proceeding—and how important to the commerce of the country—is, we fear, not generally understood. We must, however, presently deal with the revenue features of the case so as to carry out the intent of Congress to maintain an adequate national transportation system."

There were no dissents to the report, and all members of the commission participated, including Commissioner Johnson who is also director of the Office of Defense Transportation. The report, dated April 13 and made public April 19, was brief, occupying only 9 mimeographed sheets, more than 4 of which were devoted to the 32 formal findings. Most of the latter dealt with rates and charges accorded exceptional treatment. The estimate that the annual-basis yield would be approximately $300 million was made by the commission's staff and given in an explanatory notice by I.C.C. Secretary W. P. Bartel, which was issued along with the decision. By territories, the additional revenue is expected to be divided as follows: Eastern district, $180 million; Pocahontas region, $19 million; Southern region, $42 million; Western district, $58 million.

Up 43 Per Cent Since June, 1946

The additional $300 million will raise the annual-basis yield of these Ex Parte 166 interim increases to $1,535 million above that of the rates in effect prior to the first of such increases, i.e., the October 12, 1947 basis. After setting up that figure, the Bartel notice went on to say: "As the increases allowed in October last were super-imposed upon the increases allowed in the earlier decisions in a similar application by the carriers (Ex Parte 162), effective July 1, 1946, and further increased effective January 1, 1947, the total increases in gross freight revenues of the Class I railroads from June 30, 1946, to and including the increase now authorized, are estimated by the commission's staff as slightly over $2,500 million, or approximately 43 per cent. These figures relate to freight alone, and do not include increases in other operating revenue of the carriers from increases allowed in passenger, mail, compensation for transporting express, and other operating revenues, which for the Class I railroads aggregate about $300 million a year. The commission's staff points out that these estimates are based on the assumption that the states will follow the same general pattern, and that the railroads will again handle the normal amount of traffic."

Among commodities accorded exceptional treatment are lignite coal with authorized increases of 20 cents per net ton or 22 cents per gross ton. These supplant January 5 increases of 10 and 11 cents, respectively. The latter was also the January 5 adjustment of rates on anthracite and bituminous coal and coke which now take the following instead: Where present rates (excluding the previous interim increases) are $1.15 or less per net ton and $1.29 or less per gross ton, 20 cents and 22 cents, respectively; over $1.15 but not over $2.50 per net ton and over $1.29 but not over $2.80 per gross ton, 25 cents and 28 cents, respectively; over $2.50 per net ton and over $2.80 per gross ton, 30 cents and 34 cents, respectively. The general finding as to rail-water rates on coal and coke is that all factors of such rates which are subject to commission jurisdiction shall be considered as a unit and subjected to a single increase. This is followed by a special finding stipulating that rates on coal from Illinois mines to East St. Louis, Ill., and Alton, for movement beyond by barge to points on the upper Mississippi river, may be increased 12 cents per net ton.

Some Adjustments Contemplated

Rates on iron ore, other than those for movements to the upper Lake ports which get the above-mentioned increases of 10 cents per net ton and 11 cents per gross ton, will now take increases limited to 25 cents per net ton and 28 cents per gross ton, these to supplant the January 5 increase of 10 cents per ton, net or gross as rated. The increases in rates on ores and concentrates of aluminum, copper, lead, and zinc, unground manganese ore and chrome ore will be limited to 30 cents per net ton or 34 cents per gross ton. In the January 5 adjustment, a specific increase of 20 cents per ton, net or gross as rated, applied to aluminum, copper, lead and zinc ores and concentrates.

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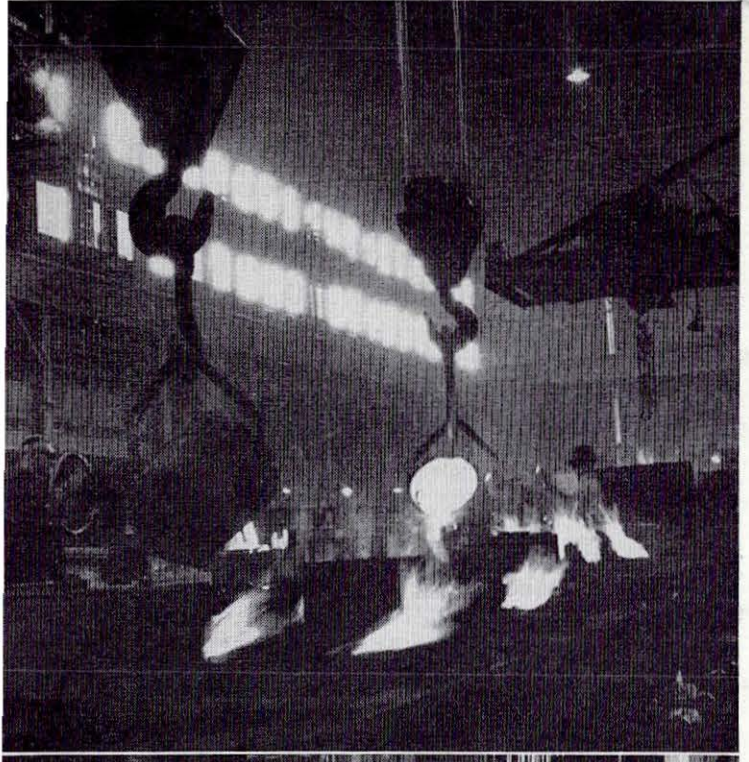
(*Continued on page* 59)



ALCO'S DIESEL LOCOMOTIVE PLANT AT SCHENECTADY

Within recent weeks large numbers of railroad officers and supervisors have been the guests of the American Locomotive Company at the Schenectady, N. Y., plant where Alco-G. E. locomotives of all types are assembled and where the manufacture of the 12- and 16-cylinder 1,500-hp. and 2,000-hp. engines has been concentrated in a modern engine-building plant. These V-type engines are used in both the passenger and freight road power as well as in the combination road switcher.

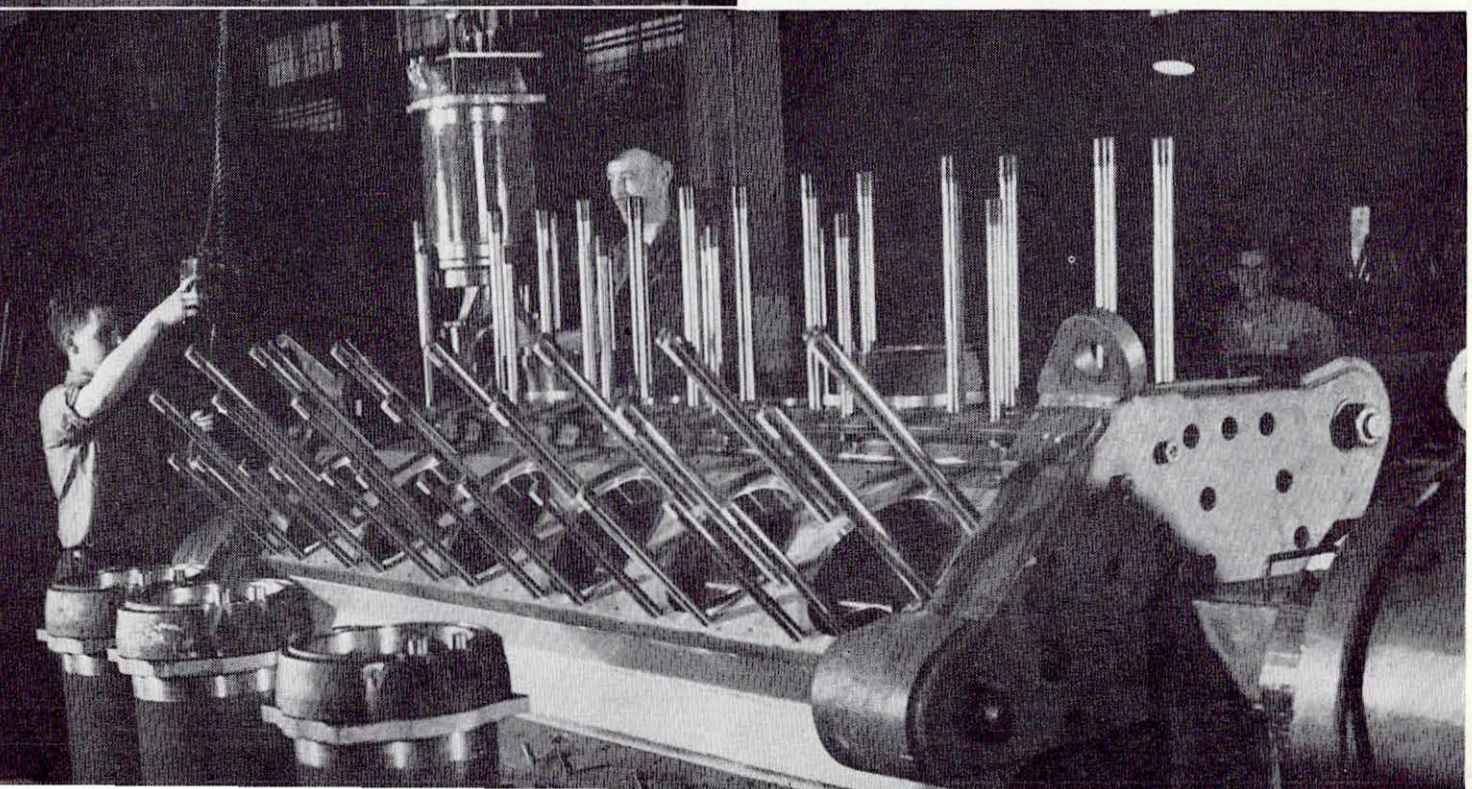
In conjunction with the production of engines the Schenectady plant produces spare parts for engines and locomotives that are distributed to the several zone warehouses located in strategic parts of the country for distribution to the railroads in local territory.

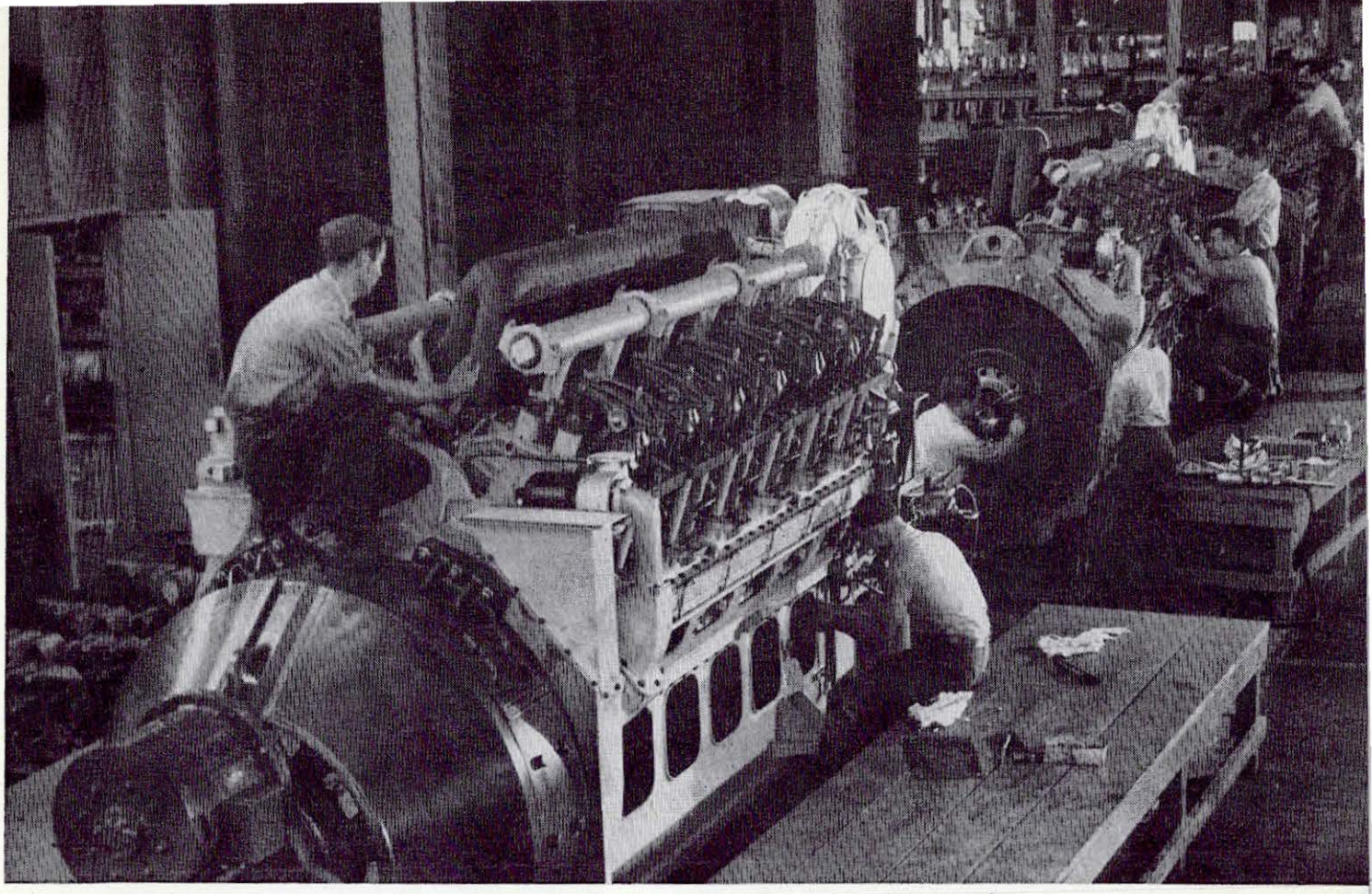
About 92 per cent of the locomotive output at Schenectady is Diesel-electric power with the remaining 8

Top — Modern foundry equipment and practice are employed in producing the castings that go into Diesel engines

Center — Cylinder heads for 1,500- and 2,000-hp. Diesel engines undergoing final inspection on an assembly line

Below — First engine-assembly station — Connecting rod and piston assembly being lowered onto the block



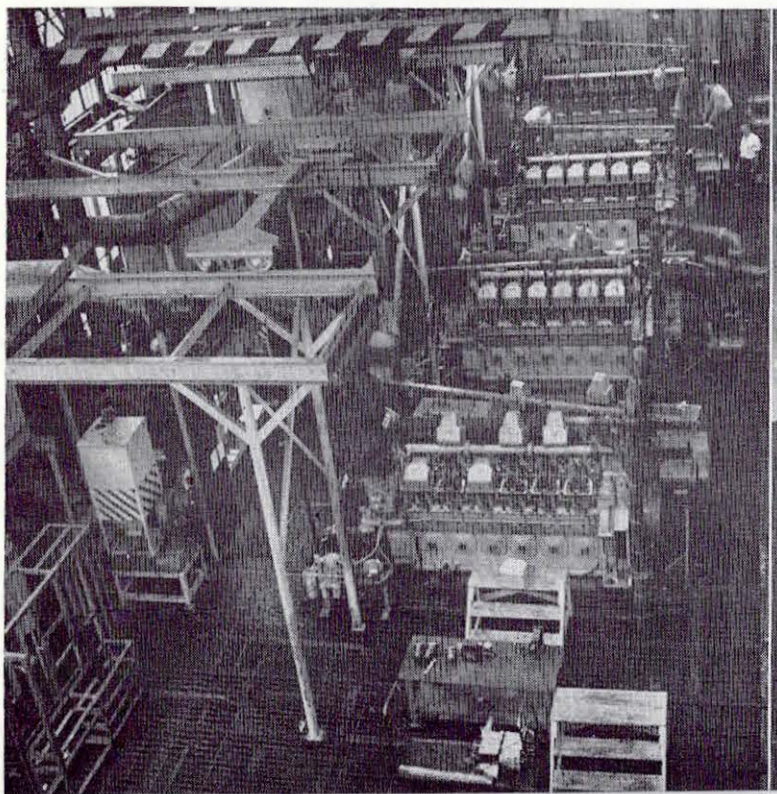


Nearing the end of the assembly line for 1,500- and 2,000-hp. engines

per cent accounted for by steam motive power, at present mostly for export. The Diesel-electric manufacturing facilities have been expanded from 78,000 sq. ft. to 225,650 sq. ft. The engine plant operates on the assembly-line principle from the foundry to the final test floor. One entire building is devoted to the machining operations on the many engine parts; the engine assembly, test and final inspection occupy another building.

The pictures on these pages illustrate the important steps in the production of Alco-G.E. Diesel-electric locomotives.

Below left — Test room where engines are run for 24 hours before being installed in the locomotive. Below right — Lowering the engine into the chassis in the erecting shop



FRENCH RAILROADS DEVELOP NEW FREIGHT-RATE SYSTEM

Completely revised basis of charges and classification reflects mathematical relationships between value of commodities and cost of transportation service

By G. LLOYD WILSON
Professor of Transportation and Public Utilities, University of Pennsylvania

Prior to 1944 the freight charges of the governmentally owned and operated French railways had for many years been based principally upon what the traffic would bear. This method of rate making is tantamount to charging rates on the ad valorem principle, although the rates were fixed not only upon nor in strict proportion to the value of the articles, but by considering value as a principal factor modified only by managerial judgment as to the effect of the rates upon the movement of the traffic.

The strict application of the ad valorem principle of pricing is found in import duties which are varied precisely according to the value or price of the goods without the application of any test or judgment to ascertain the effect of this method of charging upon the quantities of goods imported.

In freight rate construction the management of the French railways, like the managements of many other countries under either public or private ownership and operation, sought to establish relatively high freight rates on articles of high value per hundred pounds or per ton—rates which were as high as practicable under the circumstances of movement, taking into account the value added to the goods by the fact of their transportation from the places of origin to destinations. The high freight rates upon articles of high value added but little to the market prices of the goods.

In like manner, low rates were made upon articles of low value because even these relatively low rates amounted to an appreciable percentage of the market prices of these goods. The rates upon these articles were not strictly ad valorem but were made as low as practicable, some consideration being given to the cost of performing the transportation services with respect to these low-valued commodities as well as to the appreciation in value of the goods by reason of their transportation.

Special rates of various types were used to adjust rates between places of production and raw materials, manufacturing centers and markets due to the varying distances between these competitive areas and markets. Special rates were made also in order to facilitate the establishment and development of industrial centers in conformity with the economic policy of the French government. During the nineteenth century, freight rates made upon special bases to develop industry did much to assist in the economic development of France.

The railways of France could be used advantageously in this development, and without undue hardship to the railways so long as they had a virtual monopoly in intercity transportation. However, competition between the railways and other forms of transportation developed, particularly in the twentieth century between railways and motor transportation. The railways found themselves unable to meet the competition of the new and growing instrumentality of transportation, partly because of the bases upon which railway rates were made. The motor carriers made heavy inroads into the high-rated merchandise traffic, and the railways' earnings suffered because they were unable to average out high rated and low rated traffic as they had been able to do when they had a virtual monopoly of domestic transportation. Railway rates were reduced, often with little regard to operating expenses. The number of exceptional or special competitive rates made upon varying bases to meet motor competition and for other reasons made the freight rate structure unduly complicated and the tariffs naming them difficult to interpret and apply.

Rates on Small Consignments, 1944

In 1944, the service for the transportation of small consignments was improved by the railways by the establishment of improved cartage services. Collection and delivery services were established at all large shipping and receiving points and at many other places, thus extending door-to-door services at inclusive rates to be offered on a wide scale throughout the commercial districts of France. The rates for the transportation of small consignments were modified in order to have the rates conform more nearly to the cost of performing the service rather than to reflect the value of the goods.

Six classes of rates had been in effect upon small consignments prior to 1944, graduated chiefly in proportion to the value of the goods. These six classes were replaced by a three-class rate system, graduated chiefly according to cost, although value was not ignored. A new lower class-rate scale was established to cover consignments of small shipments offered in lots of 5 tons or more at one time. This was called the "wagonload small consignment scale" of rates. The number of classes was reduced from six to three chiefly by consolidating the existing classes and not by a thorough-going reclassification of all the articles handled in small consignments.

The express goods service offering fast service at high rates, known as the Grande Vitesse (G.V.) service, and the ordinary goods or freight train service offering slower but cheaper freight service, known as Petite Vitesse (P.V.) service, were revised by the French National Railways effective January 1, 1946. Under the former practices, shippers had the option

of shipping goods by railway either by the Grande Vitesse or Petite Vitesse services as he chose. Exceptions were made with respect to a limited number of types of traffic, such as livestock, which was always transported in Grande Vitesse service. In 1946, these two services were abolished and two new types of service were substituted.

One service was known as Accelerated Forwarding or Regime Accelere, and the other as Ordinary Forwarding, or Regime Ordinaire.

Goods shipped by Regime Accelere are transported by fast scheduled trains which provide direct service between all important commercial cities of France. These trains are not handled through the classification or marshalling yards as are ordinary freight trains. Shipments made by the Regime Ordinance are transported in ordinary freight trains on slower schedules similar to those operated previously in the Petite Vitesse service.

The selection of service between the Regime Accelere and Regime Ordinaire is not a matter of choice of shippers but depends upon the character of the goods.

In the Regime Accelere are handled all types of goods which require fast transportation, including articles of high value, perishable food products, livestock, small consignment traffic rated in the first two classes, and similar goods. The rates for this type of service are approximately the same as those charged for the Petite Vitesse service. The Regime Ordinaire service is used for the transportation of commodities which do not require fast transportation service, including bulk freight, raw materials, fuels, products of heavy industries, and small consignments in the lowest class.

Commodities which ordinarily would be forwarded via the slower and cheaper service may be shipped via the superior service at the option of the shippers if they wish to pay the higher rates for the faster service. The differences between the rates for the Regime Accelere and the Regime Ordinaire are less than the differences in the former rates applicable to the Grande Vitesse and Petite Vitesse services.

As a result of this change in 1946, a large number of articles and a considerable amount of freight traffic received the benefits of faster transportation service without increased charges. The types of goods chiefly benefitted were those particularly susceptible to the competition of motor transport carriers and services.

Parcels Rates, 1946

Another change in French freight rate-making occurred on January 1, 1946, concurrent with the establishment of the Regimes Accelere and Ordinaire. As a result of cooperation of the French National Railways and of the French Postal Administration, revised scales of charges for small parcels, including those up to 50 kilos (110 lb.) in weight, and for all parcel post shipments were put in force. These scales coordinated the rates for small parcels and parcel-post traffic and ended the anomaly of having two services available for handling of small consignments of merchandise at different scales of rates for substantially similar services. The change also assured the French National Railways of a compensatory level of rates for long-haul small parcel traffic.

While these modifications in services and charges were being made in the years 1944 to 1946, the railways were conducting investigations preparatory to revising rates upon traffic in carload lots.

On March 17, 1947, the French National Railways put a completely revised system of freight rates in effect on a nationwide basis. The new system, was the outgrowth of several years of intensive study, and experimental modifications in the old rate structure made in 1944, 1945 and 1946. The break with the past in the period 1944-46 was gradual. Each change contained slight modifications of the old structure but the changes were mere preliminaries to the sweeping changes made by the 1947 structure.

This system is based upon three fundamental principles: First, no traffic is carried at rates less than the actual operating expenses, excluding overhead costs, incurred in transporting the traffic; Second, the rates for each class of goods are fixed at a point not higher than the charges for the same or similar traffic applicable via competing forms of transportation; and, Third, the new rates, within the limits of the two principals stated above,—not below cost and not above competitive rates, are made, insofar as possible, in conformity with the old rate structure.

The new system of rates required a complete revision of the classification in effect prior to March, 1947, divided all carload freight traffic into three classes, and provided six classes for less-than-carload traffic, or small consignments. The new classification provides three carload classes for carload traffic, but the assignment of goods to classes is made with respect to the loading potentialities of the traffic rather than the value of the goods.

The new French railway freight classification is designed to encourage heavier loading and to lay stress upon the density of the goods and their good stowage qualities by making the lowest bases of rates applicable to goods which can be and are loaded to utilize the maximum weight carrying capacity of the freight cars. The loading potential of each commodity was studied and the articles have been assigned to one of the three following classes: Class 1, the highest class, included all goods in which the maximum loading potential is less than 10 tons in a 20-ton capacity freight car. Class 2, the next lower class rating, include all freight which can be loaded to at least 10 tons but to less than 20 tons in a 20-ton capacity freight car. The lowest class rating, Class 3, includes all freight which can be loaded to at least 20 tons in a 20-ton capacity car.

In making the studies which resulted in the new system of freight classification, the loading and stowage characteristics of the various commodities were analyzed. A considerable body of loading and stowage data had been accumulated during the period of World War II when the acute shortage of freight cars required that maximum use be made of existing equipment. Information was available with respect to the maximum loads of various commodities which would be accommodated by cars of various kinds and sizes. The records of the prewar shipments in the commercial freight offices of the French National Railways were studied in order to obtain additional data with respect to loading and stowage.

Upon the bases of these two sources of data, loading and stowage standards were set up and the commodities were grouped into the new classes according to these criteria: Class 1 includes goods which are light in weight in proportion to their bulk—that is, articles of low density, and also fragile articles upon which the risk of damage increases the cost of transportation; Class 2 consists chiefly of manufactured goods—that is, finished goods for consumer use or consumption; and Class 3 consists chiefly of heavy merchandise including raw materials and supplies and semi-finished goods.

Special rates are made outside these classes upon articles of extraordinary characteristics which do not fit readily into a density classification. These articles include livestock, some types of highway vehicles, corpses, newspapers and other publications, securities and documents, and a few other articles of extraordinary, high value. In the process of classification many articles have received new class ratings. Most of the class rating revisions have been downward, particularly from Class 1 to Class 2, although there have also been some articles of light density upgraded from lower to higher classes.

Classification and Rate Scales

In shipping small consignments, the new French classification is used by shippers to determine the class rating of the goods they ship because the rates charged for the transportation of goods in small lots are determined directly by reference to the classification and by the distance the shipments are to be moved.

In the case of carload traffic the classification is used to determine which of the rate scales is to be applied to particular shipments. The series of rate scales which cover all commodities, except the exceptional ones mentioned previously, are constructed so as to take into consideration the density of the goods as reflected in the classification; and the costs of transportation including line-haul costs, switching or shunting costs, depreciation of equipment, and other cost factors; quantity shipped, and distance.

Carload rates are named upon each commodity in lots of different weights, depending upon the density of the goods. For example, separate rate scales are applicable to shipments of goods in Class 1 in lots of 8, 7, 5 and 4 tons. On certain very light and bulky articles such as empty containers and light vehicles rates are quoted on even smaller lots. The rates for the same distances are lowest on the large quantity lots and higher on the small quantity lots. Articles in Class 2, relatively denser goods, are given different scales of rates applicable to the articles in 15, 10 and 5 ton lots. Freight classified in Class 3, heavy and dense commodities, are given rate scales when shipped in 20, 10 and 5 ton lots. The tons referred to here are metric tons of approximately 2,204 lb. The actual rates applicable to various commodities in these different-sized lots are worked out by the French Railways and published in the tariffs in francs per kilometer for each of a number of distance zones.

Minimum charges for shipments of each class and in each quantity bracket are based upon the charges applicable to that class and quantity at each scale for a minimum distance of 25 kilometers, approximately 15.5 miles. Prior to the establishment of the new rate, French railway freight rates had been based upon minimum charges for hauls of 6 kilometers, or approximately 3.7 miles. Studies made by the staff of the French Railways demonstrated that relatively high minimum charges were necessary in order to cover the costs of placing cars for loading and unloading, billing, and switching services. Unless short-haul rates cover and more than cover these constant out-of-pocket terminal expenses, obviously there is nothing left to cover line-haul expenses. These relatively high minimum charges will doubtless lead to the diversion of some short-haul traffic to highway transportation, but the railways will accept this contingency rather than haul traffic at non-compensatory rates.

In the transportation of certain types of low-grade bulk traffic, such as coal and sugar beets, where railroad service is the only practicable and efficient means of transportation, special short-haul carload rates at lower than the minimum rates ordinarily are applicable. The changes in the carload lot rates required some additional modification in the rates applicable to small consignments in order to avoid conflicts between these rates.

The distance zones commencing with an initial zone of 25 kilometers or 15.5 miles, progress upward at intervals of 3 kilometers, or 1.9 miles, up to 49 kilometers, or 30.4 miles. From this point the distance zones are of 4 kilometers each, or 2.5 miles, up to 199 kilometers, or 123.6 miles. Beyond this point the zones are 10 kilometers or 6.2 miles up to 1,179 kilometers or 732.6 miles. The next zone is one of 20 kilometers from 1,180 to 1,199 kilometers, then five zones of 50 kilometers from 1,200 to 1,449 kilometers, then a zone to cover all distances beyond 1,450 kilometers.

Following the classification of the goods according to their density and stowage characteristics, the determination of the bases of rates for lots of various quantities for each class of goods, and the determination of the size of the distance zones, the next step was to determine the precise scales of rates to be published for each kind of goods. This was done by plotting minimum rates based upon cost of transportation. These scales of base rates are known as baremes planchers. Scales of maximum rates were constructed based upon studies of the average costs of transporting the same types of goods for similar distances by motor transportation services. These maximum or ceiling scales are known as baremes plafonds. The actual rate scales for each commodity are constructed so as not to be higher than the baremes planchers nor lower than the baremes plafonds.

These maximum of ceiling and minimum or base rate scales are plotted on graphs. In the case of ceiling rates (baremes plafonds) the additional amounts added for each zone decrease slowly as the distance increases. The increments added for each additional zone in the case of the base or minimum rates decrease substantially as the distance increases. Stated differently, the base rate scales increase much less in proportion to distance than in the case of the ceiling rates—the former scale curve is a much flatter curve than the latter.

An example may be cited to illustrate this point. The base rate scale (baremes planchers) for a 10-ton consignment of Class 2 freight produces a charge of 100

francs for 25 kilometers (15.5 miles) and 573 francs per ton at 1000 kilometers (621.4 miles). This is an average increment or addition of .485 francs per ton per kilometer. The ceiling scale (bareme plafond) on the same traffic produces a charge of 105 francs per ton at 25 kilometers and 2,057 francs per ton at 1,000 kilometers. This is an average addition of 1.94 francs per ton per kilometer, almost four times the average additional increment per ton per kilometer provided for in the base rate scale.

Actual Rate Scales

Between the base and maximum rate scales used as guide lines, three distinct series of rate scales were calculated, known as Series A, B and C Scales. The Series A scale was constructed upon the trend line of the ceiling rate scale (baremes plafonds). The Series C scale was built upon the general trend of the base rate scale (baremes planchers). The Series B scale was constructed between these two scales. Ninety distinct rate scales applicable to various commodities were formulated for each series—A, B and C—producing 270 separate scales. The Series A scales are designated by numbers 1 to 90, inclusive; Series B scales bear numbers 101 to 190; and Series C scales are identified by numbers 201 to 290.

The rates made upon these numbered scales are called "numbered rates," (tarifs numerotes) to distinguish them from special rates made upon the articles not included in the classification. The latter rates are designated as "special rates" (tarifs speciaux). The numbered rate scales apply to all commodities, classified articles and for all distances.

The rate scales are so constructed with respect to levels and distance zones that the rates made on the Series B scales are always lower than the rates for the same distances on the Series A scales, and the rates for corresponding distances on the Series C basis are always lower than those constructed on the Series B schedules.

The individual rates within each series are uniformly 2½ per cent higher than the next lower number scale in each series. For example, within the Series B scales of rates, the rates on Rate Scale 103 are 2½ per cent higher than those on Scale 102; within the Series A scales, the rates on Scale 11 are 2½ per cent higher than the rates on Scale 10; and among the Series C schedules, the rates of Scale 289 are 2½ per cent higher than the rates on Scale 288.

These numerous interrelated rate scales have placed at the disposal of French National Railway freight rate specialists a variety of closely related rate scales for use in making rates on virtually all commodities shipped, from all origins to all destinations, and for all distances. The making of rates without definite mathematical bases is therefore reduced to the limited number of commodities which, because of the nature of the commodity or the nature of the hauls, or both, require extraordinary treatment. The large number of scales makes it possible to make sensitive adjustments in freight rates without departing entirely from a mathematical pattern of rate relationships.

In the selection of rate scales applicable to individual commodities, the rate makers of the French National Railways have been guided by the following considerations: First, making as few changes from the previous rates as possible in order to bring the rates into conformity with the new pattern of relationships; second, reducing to a minimum the loss of revenues resulting from the reduction of rates to the maximum or ceiling scales; and third, continuing to perform the railway services of the types and quality required by shippers and consignees.

In many instances, the reduction of rates which previously had been higher than the ceiling rate scale (baremes plafonds) did not actually result in loss of revenue because many of these commodities were transported by motor vehicles at lower rates, so that the railway rates were often "paper rates" which actually did not move traffic, or moved only small quantities where motor freight services for various reasons were not available or desirable. The reduction of the rates on these commodities to the ceiling rate level has the effect of bringing railway and motor freight services into active rate competition. The railway is better off transporting some of this traffic at lower rates than to lose it entirely to motor competitors, if the rates cover the costs of providing the transportation service. This is assured since the rates are higher than the base or minimum rates.

This sketch of the new French National Railway rate scheme is fragmentary, due to lack of more detailed data and because of the recency of the changes. The plan is an interesting attempt to make rates with recognition of several important principles:

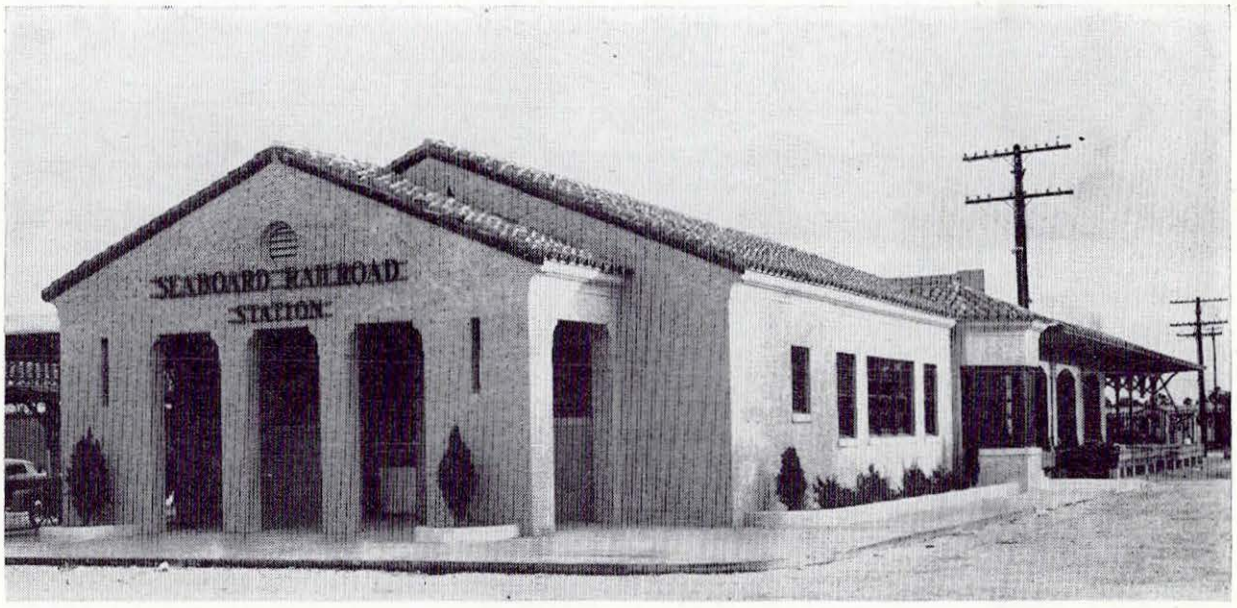
1. Avoidance of rates below minimum cost levels;
2. Discontinuance of rates higher than ceiling rates afforded by available alternative methods of transportation;
3. Separation of the schedules and patterns of making rates upon carload and less than carload traffic;
4. Establishment of minimum rates at a sufficiently high level to clear minimum short-haul costs, even at the risk of losing certain short-haul traffic which does not cover minimum costs;
5. The mathematical relationship of a large number of rate scales, so adjusted as to have relationships within groups or series and between the groups and series, so as to afford rate-makers a wide choice of rate scales, each having a definite pattern and relationship to other rates;
6. The establishment of rates with principal emphasis upon density and stowage characteristics of the goods, rather than the value of the goods or the value of the service; and
7. The establishment of freight rates upon a broad competitive basis between railway and motor transportation services, based upon knowledge that the rates so made at least are in excess of the minimum costs of providing the services.

The Railway Research Service, to which the writer of this paper is primarily indebted for the facts respecting this service, states:

> The new service is a radical departure from traditional railway practices, and is one of the first practical attempts to evolve and to adopt, on a nationwide scale, a system of railway freight rates based upon scientific and economic practices . . . The problem of the rates to be charged for merchandise train traffic under existing conditions is not confined to France, and it is interesting to note that, although the subject has been examined independently and without any exchange of views on both sides of the (English) Channel, the new French scheme has much in common with the conclusions reached by the Rail Panel of the Road-Rail Central Conference . . . (in Great Britain)[1].

[1] Railway Research Service Bulletin, London, July, 1947, pp. 94-99.

The new Seaboard station at Wildwood, Fla., is typical of the modern style of architecture to be found in tropical climates. Notice the glass-block panels at the corners of the second floor



The station at Winter Haven, while completely modern, retains the colorful Spanish atmosphere

Track side of the Wildwood station, showing the long concrete platforms

STATIONS TAILORED TO TOURIST TRADE

New Seaboard facilities at Wildwood, Fla., and Winter Haven have the modern touch, while retaining the colorful local atmosphere

When, in the Twenties, the Seaboard Air Line extended its line through Central Florida to Miami, a number of new passenger stations were built in keeping with the rather ornate style that characterized everything in Florida during those boom days. In modernizing these and older stations in Florida the Seaboard has rebuilt two of them entirely—one at Wildwood, and the other at Winter Haven. In both instances the new stations, while modern in every respect, retain the colorful local atmosphere and are designed to meet present-day passenger and travel requirements. At both of these points, and especially Wildwood, many auxiliary improvements were made to improve operating conditions and more completely divorce passenger and freight movements.

Wildwood is a junction point of considerable importance to the Seaboard. The main lines to the east and west coast of Florida diverge here, as does an important branch leading eastward through Orlando to Lake Charm, 71 mi. Although the population of Wildwood is relatively small (2,300 persons), the station does a disproportionately large passenger business for the reason that several important resort towns in the immediate vicinity use the railroad facilities at this point.

During the winter season, seven through passenger trains arrive at Wildwood from the north and an equal number depart for the north daily. Four of the southward trains are switched at Wildwood, each being made into two sections—one for Miami and one for Tampa-St. Petersburg. Similarly, four of the northbound trains are made up at Wildwood by consolidating an equal number of trains from each of these terminals. In addition, a mixed train operates in each direction daily between Wildwood and Orlando.

The Wildwood Station

The former station at Wildwood was a wooden structure and was inadequate for handling present-day passenger business. It was also out of keeping with the streamlined trains operating in this territory. The new station is completely modern in design and appointments. It is located along the east side of the passenger tracks and is a two-story building of concrete and masonry construction, with a stucco exterior. Passenger facilities occupy the northerly portion of the first floor while the southerly part is given over largely to the handling of local freight. Other facilities on the first floor include a combined freight and ticket office, a railway telegraph office, a baggage room, a storage room for passenger-train equipment, a Western Union office, and a storeroom for the telegraph and signal department. The building is rectangular in shape, being 158 ft. long, with a width varying from 34 ft. to 43 ft. at the passenger end. The freight room is 30 ft. wide.

The second floor, which is used for offices, is 51 ft. by 39 ft. and rises above the central part of the structure. This floor is reached by a stairway leading from a hallway located at the center of the building on the track side.

The exterior of the building is of cream-colored stucco, except that the lower part of the walls of the northerly part, or passenger end, is painted brown to a height of 4 ft. above the platform level. Brown trim is also used on the exterior woodwork of the windows and doors and to frame the main doorways leading to the waiting rooms. Glass block was used extensively in the exterior of the station for both decoration and lighting. The most striking use of this material is on the second floor where panels of the blocks frame in each of the four corners.

A flat canopy, 20 ft. wide, extends from the west face of the building to the edge of the platform, serving the northwest track. A narrow canopy joins this, and extends around the north and east sides of the station. Two concrete platforms were built to serve each main track, the southbound platform being 1,227 ft. long and the northbound 1,577 ft. long. Shelters of the butterfly type, each 110 ft. long, were built over the platforms in the immediate vicinity of the station. These are of steel and concrete construction with corrugated asbestos roofing.

The Waiting Rooms

The facilities for the use of passengers in the north end of the station include separate waiting rooms for white and colored patrons, located side by side, the two rooms being identical in appointments and each 15 ft. 9 in. wide and 26 ft. long. There are separate doorways in the north wall of the station.

Each waiting room has a large "picture" window flanked by smaller windows with movable sash. The flooring is of red quarry tile, harmonizing with the general color scheme of the room. A tile wainscoting of light salmon color extends to a height of 4 ft. 10 in. above the floor, above which the walls are painted light green and the ceiling oyster shell white. There are fountains for ice water in both rooms.

Two toilet rooms off each of the waiting rooms are equipped with modern plumbing fixtures. The floors in these rooms are of grey and white, 1-in. square ceramic tile, while the wainscoting is of white ceramic tile with black cap and cove.

The ticket office and local freight office, 13 ft. by 28 ft. in plan, with the long dimension in the east-west

direction, is directly south of the waiting rooms. The ticket office occupies the west end of this room and has a ticket window opening into each of the waiting rooms. Beneath the counter serving each room—on the office side—is a metal cabinet with a cash drawer and drawer for tickets and tariff files. A single counter opening in the south wall of the freight office part of the room opens onto a vestibule where patrons may call to transact freight business. Beneath this counter also is a cabinet for tariff files and a cash drawer.

The railway telegraph office is located in a 13-ft. by 13-ft. room directly west of the ticket office on the track side of the station. It is equipped with a special table for telegraph and telephone instruments and for the control panel for operating a number of power switches in the vicinity of Wildwood. An unusually large window enables the operators to see trains as they pass.

Office Areas

The second floor of the station houses the office of the assistant superintendent of the North Florida division of the Seaboard, and offices of the general yardmaster, the trainmaster, two roadmasters, the road foreman of engines and the crew dispatcher, with the principal offices located in the corners. These rooms are equipped with new metal furniture and filing cabinets.

A feature of both the first and second floors is that the entrances are so arranged as to give patrons ready access to the public facilities, without interference by employees. There is an entrance on the east, or street, side to the vestibule outside the local freight office, while the employees' entrance to the offices, both upstairs and downstairs, is on the west, or track, side of the building. Interior corridors are so arranged as to give employees ready access to all of the facilities when desired.

The Wildwood building also houses the local freight-station facilities. These include a 28-ft. by 56-ft. freight room in the south end of the station and a covered concrete platform, 8 ft. wide and 71 ft. long, along the track side. Another covered platform, 20 ft. by 38 ft., extends across the south end of this platform and the end of the freight room, and opens onto an open platform, 10 ft. wide, which extends south for 100 ft. The house track, stubbed at the north end of the freight room, is located directly west of the station and serves all three platforms.

The open platform and the covered platform across the south end of the station can be reached conveniently by motor trucks, as can the east side of the freight room which fronts on a public thoroughfare. Two wide doorways with overhead paneled steel doors are located on each side of the freight room, and one such doorway is provided at the south end of the room.

Adjacent to the freight room on the east side of the building is an ice-storage room, while on the west side is a storeroom for telegraph and signal materials. Also on the east side of the station is a boiler room serving two separate heating systems, one with a high-pressure oil-burning boiler for heating parked passenger-train cars, and the other a low-pressure boiler, also oil fired, for heating the building.

The exterior walls of the station and practically all of the partitions on the first floor are of concrete-block construction. The second story of the building is supported on concrete columns, and the floorbeams on this level are also of concrete. All of the floors on the ground level are of concrete, tiled in the waiting rooms and toilets, while those on the second floor are of wood. Where the concrete forms the wearing surface, as in the freight room, baggage room and on the platforms, it was given a Master Builder Company's Masterplate finish.

All plastering was three-coat work, using gypsum plaster. Johns-Manville corrugated Transite roofing was used throughout, and wrought iron or copper pipe was used for all downspouts.

Fluorescent lighting fixtures are used in both the waiting rooms and office areas; those in the waiting room being recessed into the ceiling. Elsewhere the lighting is of the incandescent type, in ceiling-hung fixtures.

The heating system of the building is of the forced-circulation, hot-water type, employing unit heaters, with three-speed control, to distribute the heat. A ventilating system is also installed to remove warm air through registers located on the second floor in the various offices. As a further precaution against summer heat, a 4-in. layer of rock-wool insulation was installed in the ceilings over the public rooms and offices.

At Winter Haven

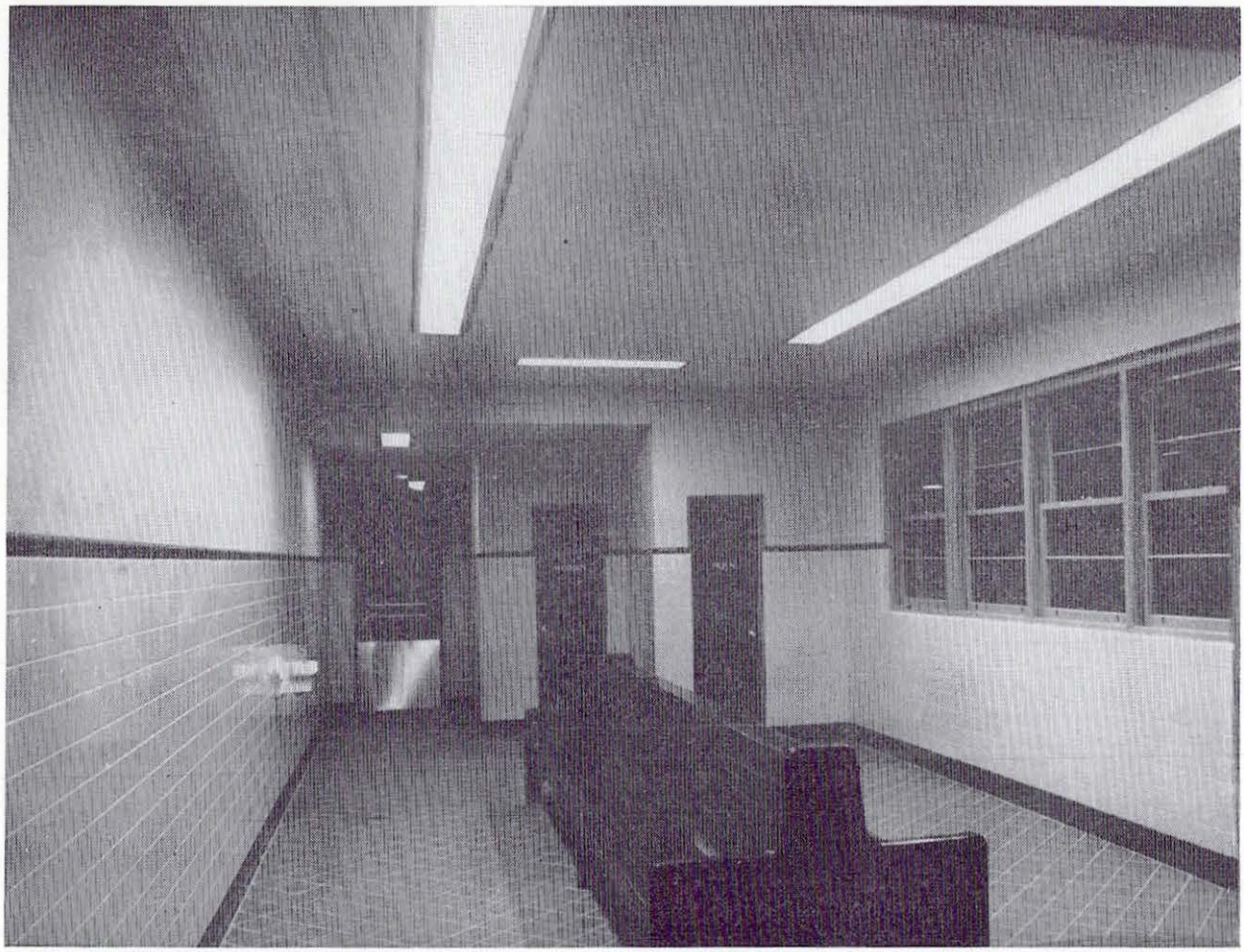
The old station at Winter Haven, built 20 years ago, was located on the east side of the tracks, opposite from and approximately 200 ft. north of the new station. The old station, a somewhat ornate building with a cupola, was being rapidly surrounded by the expansion of an adjacent citrus canning plant, with the result not alone that the driveways and parking space were considerably restricted, but that passengers driving to the station frequently encountered heavy truck traffic moving into and out of the canning plant.

The new station, of Spanish architecture, is located immediately north of the freight station and is, in effect, an extension of that building. The exterior of the freight station was remodeled as part of the improvement program, to harmonize with the architecture of the new passenger station.

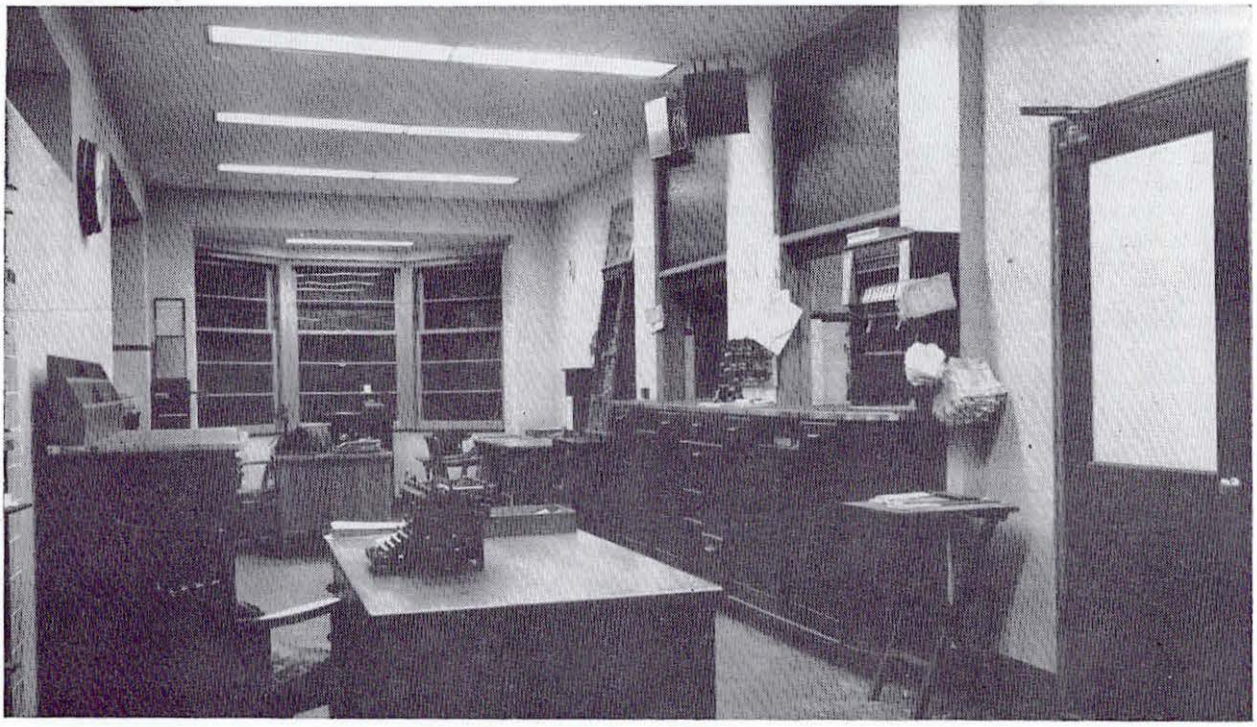
Winter Haven is a winter resort served by Seaboard trains operating between New York and Miami, and the brightly colored new station adds a pleasant touch of vacation atmosphere. The new exterior of the station building is 89 ft. by 33 ft., overall, and is served by a train shed of the butterfly type, 350 ft. long by 15 ft. wide. The walls are of concrete blocks laid on a concrete foundation, and are finished in pink stucco. The roof on the new extension is of ornamental red clay tile.

As a part of the exterior decorative scheme, an attractive portico of the mission type was built over the passenger entrance at the north end of the station. Also, semi-circular concrete curbing is used immediately adjacent to both the portico and station building to edge plantings of decorative green shrubs, which blend well with the stucco walls and red tile roof.

(Continued on page 57)



Identical waiting rooms (above) for white and colored passengers are provided in the stations at Wildwood and Winter Haven; this view shows the white waiting room at Winter Haven. The office at the Winter Haven station (below) is well lighted and efficiently arranged



HOT BOXES AND TRAIN MOVEMENT

Excessive train delays, both passenger and freight, due to hot bearings, show need for restudy of old problem

By ROBERT SCHEY
Superintendent Car Department,
New York, Chicago & St. Louis,
Cleveland, Ohio

Hot-box reduction begins at home
Good wheel-shop practice essential
Maintain A.A.R. mechanical standards
Protect car journals in storage
Dust guards need more attention
Tight journal-box covers required
Adhere to A.A.R. packing specifications
Car oil in general use not satisfactory
Hot boxes invalidate large investments
Train and encourage car-inspection forces
Stimulate interest in hot-box reduction
Monthly reports stir up competition
A little humor has been known to help

It is difficult to say anything new about hot boxes, but despite our knowledge of the subject and of requirements to maintain a good performance, railroads continue to have accidents and train detentions as results of hot journal bearings.

Reduction of hot boxes, like charity, must begin at home. Good practices in wheel shops are essential. Journals must look and feel like glass. Wheels must be mounted properly. Journals must be protected from rust in storage yards. Proper care of journal bearings is necessary to prevent damage to lining surfaces. Careful inspection during manufacture of bearings is essential to get a good product and bearings must be accurately broached.

Dust guards should be renewed at wheel changes to keep dirt out of boxes. Much has been said about the quality of waste used for journal-box packing. The Association of American Railroads has a specification for waste, and if this specification is strictly adhered to in manufacture we can expect better results from waste-packed boxes. I recall numerous cases of rejections at waste manufacturing plants by the railroad inspector, after which this same rejected waste was sold to another railroad.

Car Oil Like Glue When Cold

You will recall the general epidemic of hot boxes last January and February during the prolonged cold weather. The car oil in general use gets like glue when cold, and actually the waste sticks to the journals and in many cases rolls out at the front and pushes box lids open. To help overcome this in dispatching yards, we went so far as to put a small amount of kerosene mixed with car oil along the journal on the rising side to break the heavy sticky oil film. We have also used a swab dipped in kerosene for the same purpose. During the hot weather months, however, the oil becomes so thin it settles to the bottom of the boxes and the oil film is so meager that we again have many lubrication failures. The car oil in general use, in our opinion, contributes considerably to the continued poor hot-box performance during extremely hot or cold weather.

This article is an abstract of a paper presented at the April 12 meeting of the Car Foremen's Association of Chicago.

Must Meet Shippers' Needs

We are a transportation industry and the shipper is interested in getting his goods to destination on time and in good condition as promised. He is not concerned with our operating problems, and if the railroad industry cannot meet shippers' requirements the shipper will use competitive forms of transportation. This has been well demonstrated to us, as the trucks have taken away some profitable business in the past and are always ready to take more of our business. It then follows that if railroad transportation is to survive we must provide a more efficient service in both freight and passenger travel.

Large Investments Invalidated

Large investments are being made to expedite train movements. Some of these are better locomotives, both steam and Diesel, centralized traffic control, elimination of curves, improvement in track, revision of terminal yard facilities, better communications, and, of course, new and better freight cars with engineered features to eliminate bad order en route and minimize damage to loading. However, the waste-packed box and the friction bearing remain the same, and only by careful servicing can we combat the hot box, which offsets all the improvements by delaying trains en route and in yards.

This puts car-department men on the spot and only by continued good work can we get a satisfactory performance. In order to secure good work, it is necessary to train men to do it properly and then follow up to see that it is done. Good cooperation is needed between operating and mechanical departments to use all available time, and the mechanical department supervisor must get enough time allotted to his men to do the work completely and properly. We are all familiar with the speeding up of car inspection, switching and air test to get trains moving, but if the speeding up of inspection and journal-box servicing is done

at the expense of good work we save nothing, as it takes a lot longer to set out a hot box on the road than it takes to service the box properly at the dispatching terminal. This question of sufficient time is one of the most perplexing to carmen and can be only partially overcome by putting on more men. However, if we can prove to our respective companies that a little more time will improve the performance on the road, we will surely be allowed to take it.

Training Program Required

Again let me remind you that proper cooperation must exist between departments to produce a good performance. Train yard forces must be carefully analyzed and trained to perform their various duties with a minimum of delay. A complete training program for car inspectors and oilers must be undertaken so that, first, quality work is performed and, second, this work is done in a minimum of time. Too many men in yards have never been "sold" on the importance of their work and its relationship to good railroading. I realize that during the war we put on a lot of men not up to our usual standards, but the war is over and our fight now is for the existence of an industry that made this country great.

Continued interest of the supervisor in good work will reflect itself in the work of the individuals. Every man must be sold on the importance of his job and be given a pat on the back when he is producing good results. On the other hand, the fellow who has failures must be followed up to improve his work, and if persistent in poor work he had better look for other employment where the work standards are not so exacting.

In proceeding with the subject of hot-box control, our study can be narrowed down considerably by acknowledging that a substantial portion of hot boxes result from causes beyond the control of the individual carrier.

Regardless of the effort expended by our own wheel shop and repair track forces, our complex system of interchanging cars makes it impossible for us to know that cars coming to us from delivering roads have had axle work properly done, bearings properly inspected at the last repack date, and waste of good grade, properly saturated, applied.

The possibility that the car inspector will detect faulty machine work on axles is small. His chances of detecting worn-out bearings or bearings with defective linings are about one in five. It is improbable that he will be able to judge the quality of the packing, or the car oil with which it is saturated. Therefore, his main defense against hot boxes is to hook the journals to detect possible rough bearing surfaces or pulled brass linings and then to see that the packing is properly set and free oil added when needed.

An Assumption Inviting Disaster

We are of the opinion that hot boxes can be controlled to a great extent if the above work is done properly. To assume, however, that the average inspector and oiler or box packer will appreciate the importance of doing the work properly, and leave them to their own devices, is to invite disaster.

Because of the nature of this work, most of which is performed without the benefit of direct supervision, these employees are more or less on their own, which makes it necessary for the supervisor to be on the alert at all times for new methods to impress them with the importance of the job they are doing and to keep them interested in doing it as near to perfection as possible. To maintain this interest, a number of suggestions are advanced.

How To Stimulate Interest

(1) Competition (based on the fact that most men like to excel)
- Individual against individual
- Leader against leader
- Trick against trick
- Foreman against foreman
- Point against point
- District against district

(2) Records to be kept in front of employee
- Bulletin boards
- Monthly hot-box report
  - Make it interesting
  - Praise good performance and call attention to bad
  - Group record of each point
  - Use individual names wherever possible
  - Base comparisons on cars dispatched per hot box rather than number

On the Nickel Plate, every department is interested in hot-box performance. Our president gets a copy of the monthly hot-box report and as our performance is shown not only for the current month but also for the preceding month and the same month the previous year, any jump in the number of hot boxes can be readily detected. Our operating vice-president closely follows daily reports of train operation and if detentions are out of line he contacts the chief mechanical officer by telephone, and you know what happens then!

District car foremen and district car inspectors get daily wires showing train delays and set-outs and thus can quickly go to the point where trouble is showing and work with the general car foreman and inspectors to get it under control. We feel that by this quick action an epidemic can be averted with all the attendant undesirable consequences.

A Little Humor Helps

Last, but not least, we try a little humor in our monthly reports by having a cartoon to illustrate various conditions such as weather, men talking and always the little gremlins who sneak in the journal boxes to do their dirty work. Most of the ideas for these cartoons are furnished by the men and it does create more interest in the report.

In conclusion, I want to stress the fact that a good performance in hot-box prevention is mostly the result of the way men do their work, and, secondly the mediocre quality of lubricating materials in general use on freight cars. The car department plays an increasingly important part in rail transportation, and a good performance with trains arriving on schedule is the best traffic salesman a railroad can have. It is up to carmen to meet this challenge and, as I know carmen, I know it can be done.

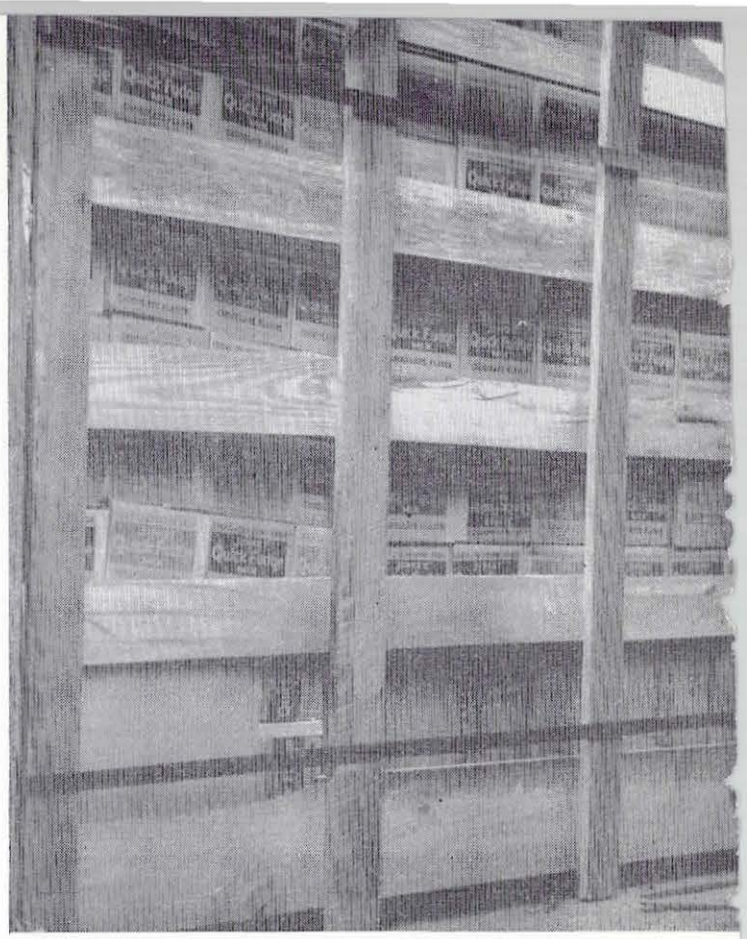
BULKHEADS REDUCE L. C. L. DAMAGE BILL ON THE ILLINOIS CENTRAL

A decrease of nearly 25 per cent in damage to less-carload freight, chargeable to the larger outbound freight stations on the Illinois Central during 1947, compared with the previous year, appears in no small measure to be attributable to the extensive use of bulkheads, secured by steel strapping, and the strapping of individual rough shipments. Six major stations—New Orleans, La., Memphis, Tenn., Louisville, Ky., Jackson, Miss., East St. Louis, Ill. and Chicago—are key points in the road's program for damage prevention by this medium.

At present the greatest use of the bulkheads and strapping is made at South Water Street station in Chicago where about 80 regularly scheduled outbound merchandise cars daily have been found adaptable to this method of bracing. At this point five one-man crews, each equipped with a portable steel strapping outfit, start out each morning to install the strapping in cars which regularly load heavily. Strapping for securing the bulk heads is usually applied to only one end of each car, into which freight of a fine or fragile nature is loaded. The opposite end is reserved for rough and heavy freight less subject to in-transit damage. As a result of the bulkheading, freight can be loaded much higher—often clear to the roof—with tight stowage throughout.

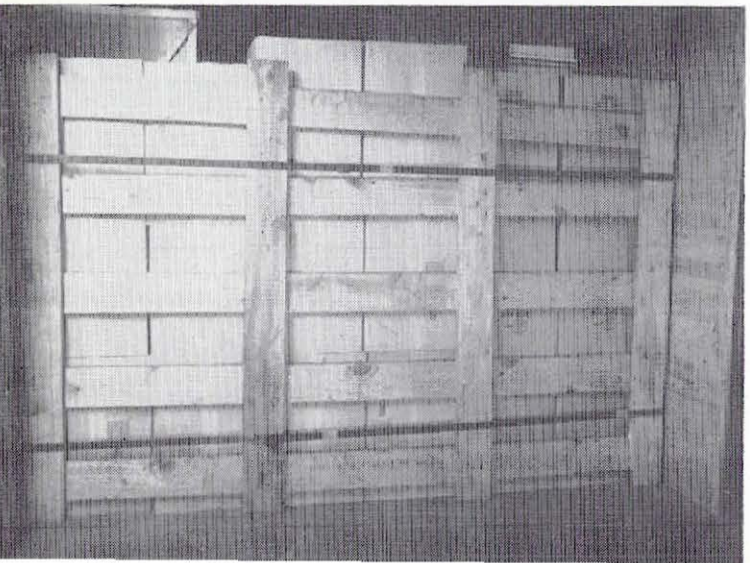
Steel strapping, 1¼ in. by 0.035 in., is cut to predetermined lengths. One end of each strap is threaded through and folded around a steel anchor plate. The anchor plates with strapping attached are fastened to opposite car sidewalls at points where all nails engage wall posts, about 18 in. and 58 in., respectively, above the car floor, and at least 3 ft. to the rear of the point where the bulkhead is to be placed. Special cement-coated nails are used. Placement of the anchors at least 3 ft. to the rear of the bulkhead and at points engaging car wall posts is necessary to insure adequate anchorage. The bulkheads are usually made of rough gum or oak lumber and consist of three upright pieces 1 in. by 6 in., 7 ft. in length, and six cross pieces 1 in. by 6 in., 8½ ft. long. They are constructed with the two uprights flush with the ends of the cross pieces so as to provide a bearing surface for the strapping.

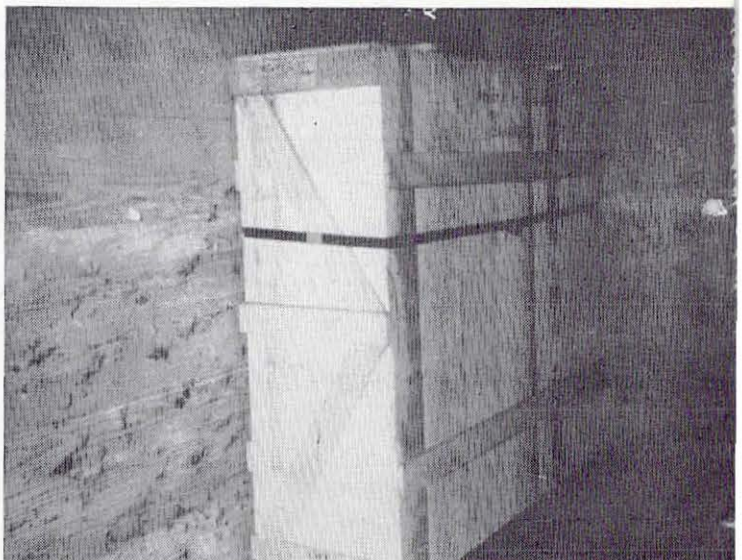
When loading is completed, the bulkhead is placed in position and the steel straps are tensioned and



Fine freight is loaded in one end of the merchandise car and secured by bulkheads and steel strapping. The seals applied after the bands are tensioned are visible at the extreme right side of the picture, which is at about the center of the car

No shifting of freight is possible when the bulkheads are in position and steel strapped as at the left. A piano (right) is loaded in the rough-freight end of the car and strapped to the wall





sealed. This is a one-man operation taking four to six minutes.

The space in the doorway area of the car, between bulkhead end and the rough-freight end, can be used for last-minute freight or excessively bulky consignments. Shipments loaded in the rough-freight end, particularly barrels, drums and crated machinery, can be strapped together as units, or anchored individually to the car walls.

Proper planning and stowing of freight in preparation for the installation of bulkheads eliminates the need for trimming or leveling of the freight prior to the closing of car doors.

Destination stations are equipped with special shears for cutting steel strapping preparatory to the removal of the bulkheads. Wrecking bars are provided for removal of anchor plates from car walls. Metal parts and bulkheads are salvaged for re-use.

Since the institution of this system by the Illinois Central in 1940, it has been that road's experience that stowers pay more attention to the proper arrangement of the freight in the cars when bulkheads are to be used. The photographs illustrate the care with which the freight is stowed, as well as the compact loads attainable when this method of bracing merchandise cars is used.

A COACH SEAT FOR OVERNIGHT TRAIN TRIPS

A railway coach seat equipped with separate foot and leg rests has been introduced in service in Budd Vista Dome sleeper coaches, available to the passenger at standard coach fares. The seat was developed jointly by the engineers of the Budd Company, Philadelphia, Pa., and S. Karpen & Bros., Chicago, who are the manufacturers.

These day-and-night seats were developed to increase comfort for coach passengers on overnight trips. Each fully adjustable, individually reclining seat is equipped with a heavily padded leg rest which furnishes greater support for both the legs and feet and makes it possible for the occupant to sleep in a relaxed position.

The leg rest is hinged at the upper end to the front of the seat. The foot rest is supported by steel tubes which are normally drawn up within the leg-rest structure by spring pressure so that the foot and leg rests hang down underneath the seat and are completely out of the way when the passenger wishes to occupy the seat in the ordinary manner. An adjustable foot rest attached to the base of the seat ahead is then available.

The leg rest is adjusted to a comfortable position by the foot pressure of the occupant

When the seat is reclined and the occupant wishes the support of the leg rest, he releases it by a light pressure on a knob at the edge of the seat, puts his feet down against the leg-rest foot rest, moves the latter forward, and extends it by pushing forward on it. A roller on the back of the foot rest rides on the floor and determines the angle of the leg rest by the distance to which it is extended. It automatically adjusts itself to a position in which the occupant is comfortable, and supports his feet as well as his legs, irrespective of his stature.

Stations Tailored To Tourist Trade

(Continued from page 52)

The new station affords identical waiting rooms for white and colored patrons, with toilet facilities for each, as well as an office with efficient ticket-selling facilities, a baggage room and a record room. The interior carries out the bright color scheme and attractive appearance. Above a cream-colored glazed-tile wainscoting with a black border, extending 5 ft. 4 in. above the floor, the plaster walls are painted in a harmonizing shade of green. The walls of the toilet rooms are finished with brightly colored ceramic tile to a height of 6 ft. 4 in. The floors of the waiting rooms are surfaced with quarry tile, with ceramic tile flooring in the toilets. The flooring in the office is asphalt tile.

Numerous windows in the new station, with horizontal panels to give a modern effect, add to the brightness of the interior. These have wooden sash since metal sash was not available. Night illumination throughout the waiting rooms and office is by fluorescent lights, housed in attractive flush-type fixtures. These same areas, and the toilet rooms, are heated with electric unit heaters and are equipped with electric water coolers.

Construction of the new stations at Wildwood and Winter Haven was carried out under the general direction of W. D. Simpson, chief engineer of the Seaboard, while the building work was under the supervision of W. L. Darden, engineer of buildings, with T. J. Eppes, in direct charge of construction.

PLAN 1948 CAPITAL OUTLAYS OF $1.3 BILLION

Estimates submitted to I.C.C. bureau indicate expenditures 59.4 per cent above those of 1947; "Monthly Comment" also shows that latest wage increases put average hourly rate 76 per cent above 1939 level

Class I railroads, which have submitted estimates to the Interstate Commerce Commission's Bureau of Transport Economics and Statistics, expect to make gross capital expenditures of $1,294,627,495 in 1948, according to the latest issue of the bureau's "Monthly Comment." This would be an increase of 59.4 per cent above the $812,422,333 spent by the 127 reporting roads in 1947, when all Class I roads spent $847,237,426.

The estimated expenditures for the first six months of this year amount to $654.2 million, or 86.6 per cent more than the actual expenditures of $509.6 million in last year's first half. "Actual gross capital expenditures of $85.6 million reported for the month of January," the bureau continued, "were 79.5 per cent higher than the $47.7 million recorded in January, 1947. January expenditures of $22.4 million for road and $63.2 million for equipment exceeded those of January, 1947, by 43.1 and 96.8 per cent, respectively."

Equipment, which accounted for 66.1 per cent of the total expenditures in the first half of 1947, is expected to represent 77.9 per cent of the total for the first half of 1948. The accompanying table shows the actual and estimated expenditures for the first six months of 1947 and 1948, respectively, separated between road and equipment.

Gross capital expenditures, Class I steam railways

Period	No. of roads	Road	Equipment	Total	Percentage distribution Rd.	Equip.
		Thous.	Thous.	Thous.		
Actual:						
1st half 1947 ..	130	$118,814	$231,790	$350,604	33.9	66.1
Estimated:						
1st quarter 1948	127	65,182	237,750	302,932	21.5	78.5
2nd quarter 1948	127	79,400	271,835	351,235	22.6	77.4
1st half 1948 ..	127	144,582	509,585	654,167	22.1	77.9
Per cent increase 1st half 1948 over 1st half 1947 ..		21.7	119.8	86.6	—	—

Hourly Wage Rate $1.269

Another article in the "Comment" presented figures showing the rise since 1939 in the average straight-time compensation per hour of employees of Class I roads, excluding executives, officials and staff assistants. There it was calculated that the December, 1947, figure would become $1.269, an increase of 76 per cent above the 1939 average of 72.1 cents, if the 15½ cents per hour wage increase recommended recently by the emergency board is accepted by the three unions involved—the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen and the Switchmen's Union of North America. The recommendation called for application of the increase retroactively to November 1, 1947.

The earlier increases of the same amount, which were awarded to non-operating employees by an arbitration board, and then granted by the railroads to employees represented by the other two operating unions, had put the December, 1947, average compensation at $1.253 per hour, an increase of 12.5 per cent above the December, 1946, figure of $1.114 and 73.8 per cent above the 1939 average. The average for the year 1947 was $1.155, as compared with 1946's $1.098 and 1945's 91.6 cents.

In 1947, the total payroll of the carriers reached an "all-time high" of $4,350 million, exclusive of the effect of the retroactive feature of the emergency board's recommendation, the bureau pointed out. This was 50.1 per cent of gross operating revenues, as compared with similar percentages for the eight preceding years ranging from a low of 38.9 in the war year of 1943 to 54.7 in 1946. For December, 1947, the payroll was 48.8 per cent of the operating revenues, as compared with 54.2 per cent in December, 1946. "This," the bureau suggested, "may be attributed largely to the fact that as a result of the 1947 increase in rates, fares, and charges, December, 1947, revenues were $169 million over those for the same month in 1946 whereas the corresponding increase in compensation was $48 million."

Regional Traffic Pattern

Recalling its 1946 study* of the effect of war facilities on postwar distribution of freight traffic and postwar changes in the traffic flow between the rate territories, the bureau presented figures indicating how this postwar pattern has been developing. The data show ton-miles and passenger-miles and their percentage distribution in 1939 as a prewar year, 1944 as the peak war year, and 1947 as the latest postwar year.

Between 1939 and 1947, the Eastern district and Pocahontas region both showed relative declines in the proportions of revenue ton-miles produced. The Eastern district which produced 39.38 per cent of the country's total in 1939 was down to 35 per cent in 1947; the change in the Pocahontas region was a drop from 11.31 per cent to 10.03 per cent. The Western district, with its proportion up from 36.17 per cent in 1939 to

*"Regional Shifts in Postwar Traffic of Class I Railways" (see *Railway Age* of October 19, 1946, page 658, and November 16, 1946, page 851).

41.36 per cent in 1947, gained most of what the Eastern district and Pocahontas region lost. The Southern region's proportion was up less than a half of one percentage point—from 13.14 per cent to 13.61 per cent.

Between 1944 and 1947, the relative changes "were small as compared with those between 1939 and 1944," as the bureau pointed out. It went on to suggest that, if the Pocahontas region be excluded, "it is possible to say that the territorial distribution of 1947 revenue ton-miles conforms much more closely to the distribution of the war year 1944 than to that of prewar 1939." The respective 1944 and 1947 proportions are as follows: Eastern district, 36.64 per cent and 35 per cent; Pocahontas region, 8.12 per cent and 10.03 per cent; Southern region, 13.66 per cent and 13.61 per cent; Western district, 41.58 per cent and 41.36 per cent.

As to the distribution of revenue passenger-miles the Eastern district, which produced 52.86 per cent of the 1939 total, was down to 39.37 per cent in 1944, while the Western district was up from 33.29 per cent to 41.75 per cent, the Southern region from 12.15 per cent to 15.99 per cent, and the Pocohontas region from 1.7 per cent to 3.19 per cent. In contrast to the territorial distribution of ton-miles, however, the 1947 distribution of passenger-miles conforms more closely to 1939 than to 1944. The 1947 figures are: Eastern district, 49.76 per cent; Pocohontas region, 2.44 per cent; Southern region, 13.28 per cent; Western district, 34.52 per cent.

Utilization of Car Capacity

The "utilization of freight car capacity" was indicated by another article which measured railroad performance in that respect by relating the net ton-miles produced to the "total capacity ton-miles," and to the "capacity ton-miles of loaded cars." The "capacity ton-miles" were computed "by taking the product of the freight car-miles times the average carrying capacity per car as reported by the Car Service Division of the Association of American Railroads in Form CS-15A." The tables show that the ratio of net ton-miles to capacity ton-miles rose from 33.7 per cent in 1939 to 42.3 per cent in 1945, and then dropped to 40.9 per cent in 1946. It was up again to 42.1 per cent in 1947, the monthly range for that year having been from August's 43.3 per cent to April's 40.3 per cent.

Because this ratio may be affected by any one of three variables, i.e., the average load, the ratio of loaded to total car-miles, and the average capacity, the bureau calculated the ratios of net ton-miles to capacity ton-miles of loaded cars. That was done "to segregate the loading effect," since the average load improved between 1939 and 1947 "at a much faster rate than the ratio of loaded to total car-miles." Those figures showed that the ratio of net ton-miles to capacity ton-miles of loaded cars, in the 1939-1947 period, ranged from 54 per cent in 1939 to 65.7 per cent in 1943. The 1947 ratio was 63.4 per cent.

The bureau's usual analysis of the latest monthly results showed that the freight revenue for February was 6.2 per cent more than in January, and 13.7 per cent above February, 1947, after adjustment to a 30-day month of four Sundays. February passenger revenue, on the same basis, was off 4.8 per cent from the previous month, and 1.7 less than in February, 1947. The freight revenue index (based on the 1935-39 monthly average as 100) was 242.7 for February, compared with January's 228.4, and 213.9 for February, 1947. The February passenger revenue index, at 219.9, compared with January's 231 and February, 1947's 223.7.

Net railway operating income for the 12 months ended with February was $759,466,000 and net income was $467,231,000. These compared, respectively, with $605,678,000 and $288,225,000 for the 12 months ended with February, 1947, and with $814,618,000 and $415,284,000 for the 12 months ended with February, 1946.

Adds 4 Per Cent to Freight Rate Increase

(*Continued from page* 43)

had upset the assumptions on which its earlier decision was based. The report listed and discussed the failure of 1948 carloading to attain the 1947 level; the "bad weather" of the past winter; drought conditions in the west; the effect of the coal strike and coal-conservation orders on railroad traffic; the rising trend of material prices; and "unsettled labor conditions in both transportation and manufacturing."

In the latter connection, the report made an obvious reference to the pending wage and rules case of the three holdout operating unions—the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen and the Switchmen's Union of North America, which have not accepted the recommendations of the recent emergency-board report. "The railroad petitioners," the commission said, "are now facing either the possibility of a work stoppage under a strike vote already taken, the processes of mediation having failed to bring about a settlement, or they will be called on to increase their labor costs more than was contemplated by their offer, narrated in the record of this proceeding."

"In the meantime," the report continued, "the unusual demands upon the carriers have seriously affected their cash position, and must adversely affect their credit at this time when some expansion and much rehabilitation are required in the national interest, as well as for the healthy condition of the carriers individually.

"In short, the situations of emergency which led to our interim orders in this proceeding are repeated, despite the successive marked rate increases that have gone into effect. The impact of the conditions indicated is most severe in the East, severe in the South and Western Trunk-Line territory and threatening in the remainder of the country. However, they have not had the same effect upon all carriers, and certain of the largest and most important system are those most severely affected."

Here the commission referred to an appendix to the report wherein it had set out the latest available operating ratios of the larger roads for comparable months of 1946, 1947, and 1948, and other selected

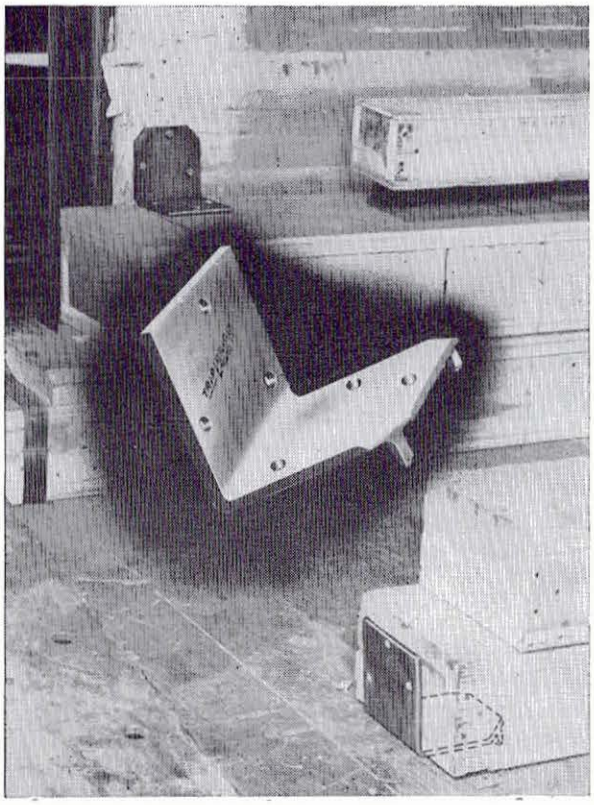
statistical data, "which speak for themselves." Previously it had been pointed out that stipulations made in the case authorized it to take judicial notice of such current returns of the railroads.

"There is," the report asserted, "but one immediate corrective for this situation under the Interstate Commerce Act: A further substantial increase in freight rates and charges. That remedy must be applied, although we have not completed the readjustments of the freight rate structure of the country necessitated by the successive large increases in basic rates involved in this proceeding."

METAL CLEAT DESIGNED TO REDUCE LOSS AND DAMAGE

A metal fastener known as the "Peyton Spur Cleat" has been designed for better securing of shipments in freight cars and is now being manufactured by the National Dunnage Company, 5715 Hudson street, Dallas 6, Tex. The Peyton cleat may be obtained in a standard angle type, a knee-brace type, or in types specially designed to meet shippers' requirements. Spurs at a 45-deg. angle to the base permit anchorage of the cleat cross-grain to wooden car walls or floors.

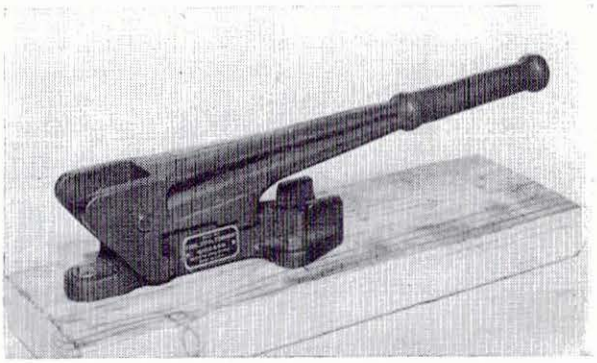
Advantages claimed for the Peyton cleat are added holding-power, space-saving design and flexibility of use. They may be used as hold-down, reinforcing, pocket, back-up cleats, or chock and side blocks, guarding against longitudinal, transverse or vertical motion. Stock sizes include 6-hole cleats 2 in. by 3 in. in width and length, 3 in. by 3 in., 3 in. by 4 in., and 4 in. by 6 in., or will be supplied in other sizes as required.



The Peyton "TripLgripR" spur cleat

ANCHOR THREADER AID IN STRAPPING

The Acme Steel Company, Chicago, has designed a unit-load anchor threader to simplify the fastening of steel strapping to anchors in the banding of l.c.l. freight or the installation of bulkhead gates in freight cars. The threader wraps either 1¼-in. or ¾-in. steel bands about an anchor with but two strokes of its handle. The new tool, it is said, not only simplifies the application of banding to the anchors but improves the practice because it wraps the strapping so tightly around the anchor plate.



ROLLER-BEARING GREASE

A roller-bearing lubricant has been developed by the Texas Company, 135 East 42nd street, New York, for use on locomotive, passenger, and freight-car journals to replace liquid oils. Known as 979 Roller Bearing Grease, the product is expected to increase the time between periodical inspections, and to eliminate the necessity of station-platform journal inspections on passenger equipment and intermediate terminal yard inspections of freight-car journals and boxes. It is believed that the new lubricant can remain in service for two years or more before repacking becomes necessary.

This development is said to eliminate lubricant leakage and to form a seal against water, dirt, and wheel and brake-shoe dust. The product protects itself from contamination. It is water resistant and will not wash out. Even at the lowest winter temperature the starting and running torque is low and the product is toughened by chemical additives so that it withstands extreme heat and retains its lubricating powers in all kinds of weather.

The grease has undergone months of rigid testing in laboratories and in the field and has proved satisfactory. It is now being tested in fast transcontinental passenger and freight equipment.

FUEL OIL METER FOR DIESEL LOCOMOTIVE USE

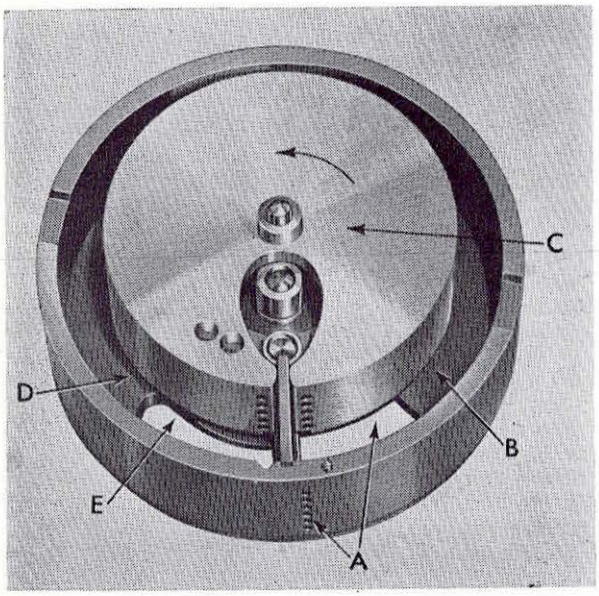
Neptune Red Seal fuel-oil meters for measuring the fuel consumption of locomotive Diesel engines are low-flow meters with a rate of flow per hour that varies from a minimum of 10 gal. to maximum of 150 gal. The meters have a total register capacity of 999,-999 gal., and are suitable for operation under a maximum working temperature of 140 deg. F., and a maximum working pressure of 125 lb. per sq. in.

The meter is a positive-displacement, oscillating-piston design with only one moving part in the measuring chamber—the piston. A continuous nonpulsating movement is said to result from the counter-clockwise rotation of the circular piston which is guided in its motion by the spindle against the roller that holds the piston in contact with the walls of the chamber. A similar cycle occurs in the inner chamber formed by the piston and the inner ring. The circular motion of the spindle is transmitted through a gear train and stuffing box spindle to the register. Change gears, by means of which calibration is effected, are incorporated in the drive.

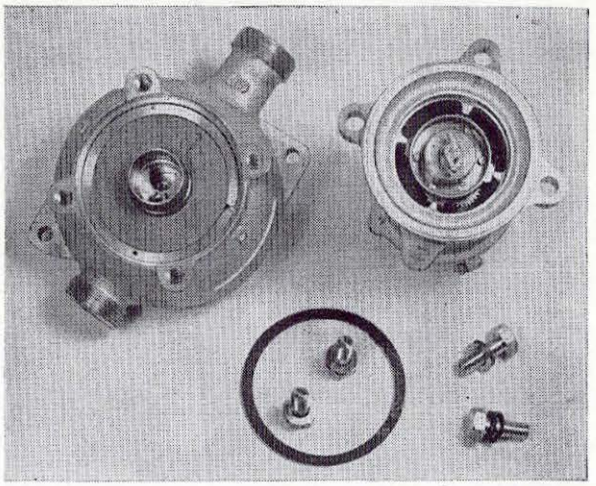
The casings have male-threaded studs for 1-in. ground-joint couplings. Couplings with straight tubes are furnished with the meter, but tubes bent 90 deg. are available. Special casings with a vertical inlet are also available.

The piston is aluminum, and the lower and upper main casings, gears and measuring chambers are composition bronze. All gears are machine cut.

Neptune Red Seal meters, either of the low-flow for locomotive installation or the larger capacity meters for fueling Diesel locomotives, are manufactured by the Neptune Meter Company, 50 West Fiftieth street, New York 20.



In the measuring-chamber operation, liquid enters port A, passes into space B, moves piston C in the direction shown, while the liquid in space B passes out through port E



The upper main casing containing the gear train of the Neptune meter removed to show the top of the measuring chamber

GRIDDED BEARINGS

To combine such advantages of babbitt as conformability, embedability, and seizure resistance with the greater structural and fatigue strength of centrifugally cast lead-tin-bronze, a mechanical method of gridding that makes gridded bearings practical for mass production has been developed by the National Bearing Division, American Brake Shoe Company, St. Louis 10, Mo. The bearing consists of a .002-in. lead-tin alloy run-in surface, a grid filled with N-B-M silver babbitt, and a centrifugally cast lead-bronze shell. The run-in surface of the lead-tin is electroplated in the bore and is used to increase the seizure resistance and corrosion resistance of gridded bearings.

These bearings were designed to provide the ability to conform to distortion under Diesel firing loads and working tolerances in a strong bronze as well as the ability to embed or absorb dirt or grit without harm to the bearing or the shaft. Objections to the use of bronze with a shaft that is not hardened are said to be overcome by the self-healing characteristic of the gridded bearing. This characteristic permits some of the babbitt to melt out of the grid and form a running surface that prevents seizure, thus providing a safety factor that prevents the damage to the shaft which would occur were an ordinary bearing to seize and fail.

Present applications of gridded bearings include main and connecting rods of Diesel engines and other heavy-duty service. The bearings can operate under loads exceeding 3,500 lb. per sq. in. with a shaft as low as 160 Brinell hardness. The minimum depth of the grid is .008 in., and the minimum area of babbitt is 40 per cent. The required balance between conformability and embedability for individual applications is obtained by controlling the proportion of the land (the parent bronze) and the babbitt-filled grid. N-B-M gridded bearings are customarily made as half bushings but can be furnished as full cylindrical bearings if desired.

GENERAL NEWS

Faricy Urges Finish Fight in Wage Case

Says 40-hr. week is not "feasible"; wages-prices race must stop

The 40-hr. week demanded by the non-operating employees "simply is not feasible for railroad operation, and the railroads will have to fight this third-round movement to a finish," William T. Faricy, president of the Association of American Railroads, told members of the Western Railway Club at Chicago on April 19. Speaking before some 1,150 persons, Mr. Faricy stated: "It does seem that in the interest of our economy the senseless race between wages and prices should be brought to a stop without a third round of wage increases. Everyone will lose, including the men themselves, if we have it. The railroads are well prepared and well staffed to meet the challenge of the expected third round wage increase fight."

The A. A. R. president predicted that the operating unions, representing the other 22 per cent of railroad employees, will also make substantial demands on the carriers. He pointed out that the railroads are almost under the shadow of another work stoppage, adding "conferences are still going on, and we are hopeful that a settlement will yet be reached. But suppose it is? Are we not simply putting off the evil day?"

Car Shortage Eased—Of the freight car situation, the speaker said: "Last year the industry junked more freight cars than were built, but beginning in October the turn came, and now each month that goes by sees more freight cars built than are retired. So, at long last, we are gaining back some of the lost ground. This does not mean that the car shortage is over. We shall have again this fall a substantial shortage, but I am confident that it won't be as bad as last year."

Regarding the fitness of the railroads in the event of another war, Mr. Faricy stated: "While we still have some distance to go in making up the war-induced deferred maintenance, I would say that we are definitely in better shape now than a year ago." To handle their job during another conflict, he stated, the railroads would need (1) a steady inflow of materials essential to keeping up the plant and equipment; (2) a supply of manpower which will recognize the essential nature of the industry; and (3) a freight-rate structure that will recognize the higher cost plateau to which this country has ascended as a result of wartime factors beyond the control of the railroads.

Commenting briefly on the government reparation cases against the railroads, the A. A. R. chief said: "The staff of lawyers and traffic men who have prepared the defense of those cases for the railroads includes some of the best legal brains and some of the most experienced traffic men in the country. The defense is so well prepared that it was not a surprise at all when the government announced recently that it would not be ready to proceed on the date for which the trial had been set." He added, "I have no real fear of the outcome. To me, that particular front looks a lot better than it did a year ago."

House Group Holds Transport Hearings

Railroads, other carriers offer legislative recommendations

A three-day hearing in connection with its "national transportation inquiry" was concluded April 16 by the House committee on interstate and foreign commerce. As reported in *Railway Age* of April 3, page 58, the hearings were held principally to receive presentations with respect to such problems as (1) whether regulation of all types of carriers should be centralized in one government agency or department; (2) what should be the policy of the government as to promoting or aiding certain types of carriers; and (3) whether the law governing present regulatory agencies and their administrative practices is adequate.

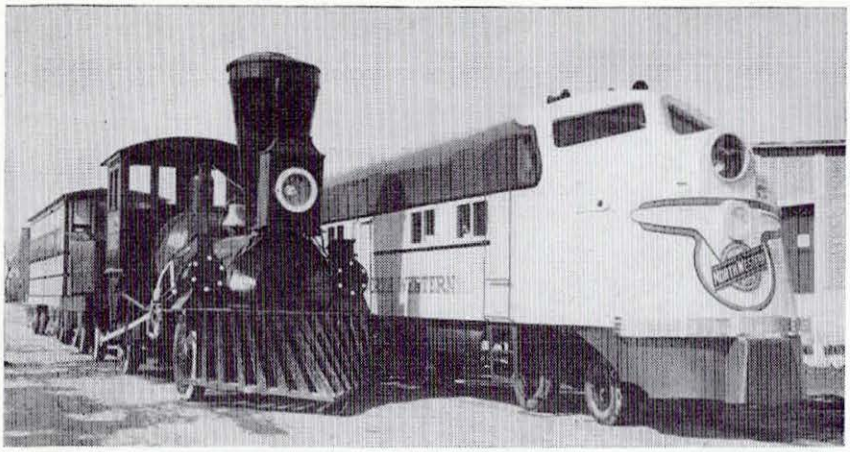
The session, according to Representative Wolverton, Republican of New Jersey, and chairman of the committee, was the first of a series of hearings to bring up to date the record of the inquiry and to consider possible new legislation to meet the present needs of the American transportation system and the requirements for the future "under any circumstances." It is hoped, he said, that eventually the committee may receive recommendations leading to any changes which may be necessary to replace the system of regulation which has developed and "which is based upon principles applicable to conditions existing 30 years ago."

Position of the A.A.R.—Appearing on behalf of the railroad industry, J. Carter Fort, vice-president and general counsel of the Association of American Railroads, asserted that the economic welfare of the nation demands establishment and enforcement of a national transportation policy that insures fair treatment for all forms of transportation so that they can compete on an equal basis.

"If each agency of transportation is required to bear its full cost, a great step forward will be taken toward bringing about fair and just competitive conditions among the several agencies, establishing a proper and economic distribution of traffic and developing a sound transportation system in the public interest," Mr. Fort said, in citing the "dangerously inadequate earnings" of the railroads and the "increasing intensity of competition" in transportation. "As an important step toward making its declared national transportation policy effective the government should refrain from subsidizing any form of transportation. Subsidies are unfair as between different forms of transportation but their vice goes much deeper. They are contrary to the public interest in a sound national transportation system in which each form of transportation performs those services it is best fitted to perform."

For One Regulatory Agency—Mr. Fort said it was the railroads' position that the regulation of all forms of transportation should be centered in one governmental agency and that such an agency should be a non-political commission independent of the executive branch of the government and answerable only to Congress. Mr. Fort reminded the committee that congress has entrusted to one agency, the Interstate Commerce Commission, the regulation of railroads, express companies, sleeping car companies, pipe lines, motor carriers, water carriers and freight forwarders. "The one departure from this consistent and logical program, the creation of a separate agency for the regulation of air carriers, was made prior to the congressional declaration of the national transportation policy in the Transportation Act of 1940, and should now be remedied in the light of that policy," he added. The A.A.R. officer said further that he thought the power of the commission to deal with rapidly changing economic conditions seems well established.

Mr. Fort also discussed the railroads' views with respect to such pending legislation as the Reed-Bulwinkle Bill, which would stay the operation of the



MODELS OF NORTH WESTERN "PIONEER" and "400" WILL TOUR MIDWEST.—Gasoline-driven, precisely-duplicated models of the "Pioneer"—first train to operate in Chicago 100 years ago—and of a "400" streamliner will be attractions of the Chicago & North Western's "Centennial Train," scheduled to begin a tour of 58 midwest cities on May 1 (see *Railway Age* of March 20, page 592). The two 60-ft. models include a tender and old-fashioned coach on the "Pioneer" and a yellow-and-green streamlined coach on the "400". Both models can be removed from the flatcars, making it possible for them to be featured in parades in the cities visited. At the completion of the tour, the replicas will be placed on display at the Chicago Railroad Fair, which opens in July. On April 14 the "Pioneer" visited the White House, where Major Lenox Lohr, president of the fair, presented an invitation to President Truman to attend.

anti-trust laws with respect to carrier joint actions sanctioned by the commission; H.R.5711, sponsored by Representative Simpson, Republican of Pennsylvania, which would amend the Railroad Unemployment Insurance Act by placing the taxes collected thereunder on a sliding scale basis which would immediately reduce the levy (paid entirely by the railroads) from 3 per cent to ½ per cent of the taxable payroll; and measures providing for the disposition of the government-operated Federal Barge Lines.

With respect to railroad earnings, Mr. Fort said that, if such earnings continue to be on a low and inadequate level, "it may well be that your committee will desire to give consideration to the incorporation into the national transportation policy of directions concerning adequate earnings even more explicit that those which are inherent in the present language." "Inadequate earnings," he warned, "increase the cost of capital by injuring the credit of the railroad industry. In the long run, impoverished railroads can only mean relatively higher rates as well as relatively poor service. . . . These are good times, with respect to traffic volume, and in times like this our earnings ought to be over 6 per cent on our investment. But instead they are running below. . . . We want the statute to guarantee that we will have the opportunity to earn a fair return and that we will not have a level of rates artificially pressed down upon us which precludes any chance to make a fair return."

Shippers Represented — Among other things, Mr. Fort also held that (1) there should be no arbitrary interference by statute with an economical consolidation or merger of railroads; (2) user taxes, such as gasoline and excise taxes and license fees, should be made sufficient so that that government will realize a "proper return" on its investment in highway systems and similar facilities; and (3) the government should avoid placing "discriminatory burdens" by statute against the railroads, such as the present unemployment insurance payroll taxes, which are not applicable to other forms of transportation.

Others testifying at the hearing included D. D. Conn and C. W. Braden, representing the Transportation Association of America; A. H. Schwietert, president, National Industrial Traffic League; J. G. Scott, general counsel, National Association of Motor Bus Operators; Robert Ramspeck, executive vice-president, Air Transport Association; H. H. Buckman, consulting engineer, National Rivers and Harbors Congress; Giles Morrow, executive secretary and general counsel, Freight Forwarders Institute; J. V. Lawrence, representing the American Trucking Associations; Colonel A. B. Barber, manager, Transportation and Communication Department, Chamber of Commerce of the United States; and R. E. Kline, counsel, Sea-Air Committee, which represents 12 principal American flag steamship companies.

Mr. Conn, executive vice-president of the T.A.A., declared that the nation cannot have a solid and prosperous economy with a major portion of its transportation constantly on the verge of bankruptcy. He outlined to the committee what he described as an "entirely new approach" to the problem of transportation and in this respect submitted an interim report embodying the steps which have been taken thus far in an association-sanctioned project to establish the "nationwide machinery for resolving the issues of the problem among economic groups in all areas, and for drafting the essentials of a new system of regulation." "We have been years getting into this transportation dilemna — with sections of the country, users and investors, and the different forms of transportation too often primarily concerned with only their vested interests," he said. "The time has arrived to join hands in a composite public interest approach for the United States — as a nation."

The Basic Need — The most crucial economic problem before this country, Mr. Conn added, is to untangle the overlapping and conflicting laws which now comprise common-carrier regulation, and to design a new and harmonious system of regulation which will meet the present and foreseeable requirements of the national defense, the postal service and the commerce of an "ever-expanding economy" and yet provide the basic financial and operating structure which will attract private credit to the transportation industry.

Mr. Conn said he hoped the committee would bear with the T.A.A. in postponing consideration of the "basic policy aspects" of the regulatory problem until completion of the association project. Thus, the only specific recommendation he made was that calling for "immediate legislation" to exempt regulated surface carriers from anti-trust restrictions not applying to regulated air carriers.

Further explanation of the T.A.A.'s "new approach" was offered by Mr. Braden, general traffic manager of the National Distillers Products Corporation. Mr. Braden is chairman of the steering committee of the movement which is called the "Cooperative Project, National Transportation Policy of the Transportation Association of America." Mr. Braden said that the T.A.A., in order to assist the House committee, set up the project as an independent organization in membership and actions, although supported by the association and with its programs ultimately to be cleared through its board.

"It has for its simple purpose," he said, "the fact that there are two ways of effecting a reconciliation of opinions on controversial points where there are several parties of interest. One is through the arrangement of protracted public hearings with opportunity of cross-examination. The other is the possibility of bringing all interests together towards an understanding of the controversial points and the broad issues, in an endeavor, at least, to obtain agreement on broad principles thereof, and as an aid to the . . . committee on interstate and foreign commerce. . . . The Transportation Association . . . does not suggest temporizing with the transportation problem and at this stage undertaking further study and research

is apt to be largely a duplication of past efforts, but its purpose is to be in position to make suggestions . . . that will effectively aid in the removal of obstructions to the application of sound principles to transportation."

Air Lines Alarmed—Mr. Ramspeck testified that it would be very "dangerous" to the welfare of the country if Congress, under the "guise of coordination," should empower any one agency or group to determine the sphere of operations of each form of transportation. The committee, he said, should table for the indefinite future the question of merging the Civil Aeronautics Board and the Civil Aeronautics Administration with the I.C.C. or any other governmental agency. The "unique characteristics" of air transportation and the regulatory functions governing air transportation, he added, are "unmistakably in a different category" from rail, water and motor carrier operations.

Mr. Schwietert declared that the N.I.T. League is opposed to any reorganization of government under which there may be any departure from the present plan under which public regulation of transportation has been administered. The league, he added, also is opposed to any investment in the I.C.C., of duties which are promotional in character with respect to any form of transportation, and also objects to the use of freight rate adjustments to change the economic pattern of the country or to cure economic ills.

In addition to advocating centralization of regulation of all forms of transportation into one agency at the "earliest practicable time," Mr. Scott also asserted that there should shortly be an end to the "promotional" and "paternal" policy of government concerning the air lines and that "they, like the rest of us," should pay reasonable compensation for what the government provides. "All of the various types of transportation have been the recipients and beneficiaries of . . . assistance, in one way or another, at one or another stage in their development, and the public interest has been well served thereby," he added. "But we think that such promotion and assistance should not be a permanent thing."

Mr. Lawrence urged, among other things, strengthening of the present legislative restrictions pertaining to control of one type of carrier by a carrier of another type, particularly with respect to the control of motor carriers by railroads, and suggested that the declaration of national transportation policy be amended so as to provide that the carriers shall be given opportunity to earn revenues sufficient to enable them to provide service of the character contemplated by that policy. A like recommendation was made by Colonel Barber of the United States Chamber of Commerce. Among other arguments in favor of this proposal, the colonel suggested that government financial aid to aviation gives "special and added importance" to the matter of allowing non-aided forms of transportation every reasonable opportunity to earn a fair return, and to emphasizing that principle in the statutes which guide the regulatory bodies.

Colonel Barber also reported the chamber's position in favor of early enactment of the Reed-Bulwinkle bill; and he advocated legislation to clarify the "controversial situation" with respect to common ownership, operation or control of carriers of different types. As to that, the chamber has recommended that operators of one form of transportation should be permitted by law to operate other forms "within reasonable territorial limits upon making an adequate showing to the appropriate regulatory authorities that it would be in the public interest and would not unduly restrain competition."

For a New Commission—Mr. Buckman discussed the policy adopted by the projects committee of the National Rivers and Harbors Congress in 1944, at which time, he said, it recommended that Congress should enact legislation reconstituting the I.C.C. so as to provide for commissioners of rail, inland waterway, air, highway and domestic water transportation. Under the proposed plan, none of the five commissioners would be eligible for appointment if he had served on the commission before its reconstitution. "It is believed," Mr. Buckman said, "that such legislative revamping of this administrative body would cause to be initiated and sustained a healthy growth of both legal and administrative reform in the development and control of our whole transportation network."

Mr. Morrow explained that, because freight forwarders have been subject to federal regulation for only a comparatively short period, the industry is not now in a position to offer suggestions or concrete proposals with respect to questions embodying transportation policy. He asked the committee not to overlook or to minimize the importance of freight forwarders in its consideration of the overall transportation picture, adding in part that, with the passage of time and with the accumulation of experience under regulation, it is natural that the need for changes in the act regulating forwarders will develop.

Mr. Kline told the committee that the flag steamship companies seek to serve by air, as well as by sea, those trade areas that "we have fostered and developed." "We are not seeking 'grandfather rights' or any mandate to the C.A.B. to certificate any of us on any particular route or routes," he said. "All that we are striving for is the assurance of equal treatment before the C.A.B., and not to be discriminated against just because we happen to be steamship companies."

Meeting of the A.A.R. Safety Section at Chicago on May 5

Eight railroad men—including T. D. Beven, president of the Elgin, Joliet & Eastern, and J. H. Aydelotte, vice-president of the Association of American Railroads—will address the regional safety meeting of the Safety Section, A.A.R., on May 5 at the Hotel Sher-

President Truman receiving from William T. Faricy, president of the Association of American Railroads, a silver medal commemorating the Sixth Pan-American Railway Congress in Havana, Cuba. Looking on (left to right) are Seymour T. R. Abt of the Office of International Trade of the Department of Commerce, and Albert R. Beatty, assistant vice-president of the A.A.R.

man in Chicago. The meeting will be held in conjunction with the Midwest Safety Conference, which is to be in session during the week of May 3. O. F. Gnadinger, supervisor of safety and personnel of the E. J. & E., will preside as chairman.

The one-day program is as follows:

Morning Session—9:30 a.m.

"The Value of Regional Safety Meetings," L. E. Hoffman, superintendent of rules and safety, St. Louis Southwestern, and chairman of the Safety Section, A.A.R.

"Cooperation between Safety and Claim Departments," M. L. Bluhm, general solicitor, Chicago, Milwaukee, St. Paul & Pacific.

"An Alphabetical Analysis of Safety," J. H. Aydelotte, vice-president, A.A.R.

"United Action for Safety," Ned H. Dearborn, president, National Safety Council.

"Safety in the Maintenance of Way Department," G. M. O'Rourke, assistant engineer, maintenance of way department, Illinois Central.

Afternoon Session—1:30 p.m.

"The Supervisor's Responsibility in Safety," G. A. Goerner, general storekeeper, Chicago, Burlington & Quincy.

"Safety and Supervision," T. D. Beven, president, E. J. & E.

"Safety in Operation," C. H. Longman, general manager, Chicago & North Western.

"Safety in the Maintenance of Equipment Department," H. L. Price, master mechanic, Atchison, Topeka & Santa Fe.

"National Grade Crossing Program" (picture), J. R. Tenney, superintendent of safety, Western Maryland.

New Job for Secretary Harriman

President Truman on April 21 designated Secretary of Commerce W. Averell Harriman for the post of chief European representative of the new Economic Cooperation Administration, with the rank of ambassador-at-large. Announcement was made at the same time that the resignation from the Cabinet of the former Union Pacific chairman had been accepted.

U. S. Chamber Committee Makes Aviation Report

Several recommendations, including those calling for federal regulation of contract air carriers and continuance "for the time being" of air-transport regulation separate from that for other forms of transportation are included in a report on "Civil Aviation" which has been made by the Transportation and Communication Department Committee of the Chamber of Commerce of the United States. Footnotes in the report show that some of the committee's recommendations were not endorsed by two of its railroad-president members—Fred G. Gurley of the Atchison, Topeka & Santa Fe, and R. E. Woodruff of the Erie.

With respect to scheduled common carriers by air, the report recommended that they should be subject to regulation "only by the federal government as to rates, service and safety." As to so-called feeder service, it was found that certificates for "experimental" services in that field should be for five-year periods. The present policy of the Civil Aeronautics Board is to grant three-year certificates.

Gurley Dissents—The recommendation on irregular common carriers was that they "be subject to regulation only by the federal government as to rates, service and safety"; that "for those engaging in carriage of passengers, directly or by charter, the inspection standards, pilot qualifications and other safety requirements be similar to those for other common carriers by air"; and that "financial responsibility to cover any liability for personal injury or property damage should be required.

Coming to its consideration of contract carriers by air, the report noted that such carriers are not dealt with in the present Civil Aeronautics Act, yet "it has been difficult to distinguish between bona fide contract services and those which have in reality a common carrier character." Its recommendation, designed to "overcome such difficulties," was that the contract carriers "be made subject to regulation by the Civil Aeronautics Board as to rates, service and safety." Here Mr. Gurley disagreed. As the footnote put it, he "opposes recommendation that economic regulation as distinguished from safety regulation be extended to contract carriers, believing that such regulation at this time would unnecessarily hamper experimentation and development in this relatively new field, particularly in view of the poor record made by the Civil Aeronautics Board in handling matters now under its jurisdiction."

The next recommendation which drew an expression of disagreement from Mr. Gurley was that relating to research. It called for a "continuing program of aviation research on an adequate scale to meet the needs of national defense" by the government, and suggested that the "best results" would be obtained "through the allocation of the (research) work to private agencies to be carried on under supervision and coordination by the National Advisory Committee for Aeronautics with guidance and support of the Research and Development Board." The recommendation also stated that "the federal government, with the cooperation of the air force, air transport operators and aircraft manufacturers, should assume a primary role in the development of such types of of transport aircraft as may be required in the interest of national defense." This latter was opposed by Mr. Gurley "in so far as it would seem to advocate a substantial subsidy for development of aircraft which would inure primarily to the benefit of commercial operators competing with unsubsidized forms of transport."

No Qualms at Federal Aid—With respect to airways, the report recommended that "plans incorporating the recommendations of all users, and principally those of the armed forces, for modernizing and developing the airways should be carried out by the federal government in the interest of national defense." As to airports, the committee rested on a reiteration of that pronouncement adopted at the chamber's 1947 meeting which said that "the national interest in the provision of an adequate nationwide airport system justifies reasonable federal aid for this purpose"; and that "reasonable user charges should be required at all publicly-owned airports and such airports should as soon as practicable be put on a self-sustaining basis."

The recommendation as to airways carries a footnote expressing Mr. Woodruff's views with respect to it, the research recommendation, and the pronouncement on airports. "Mr. Woodruff," the note said, "expresses the view that there should be a clear distinction, based on the facts, as to whether or not federal aid will be of direct and substantial interest in the national defense. He suggests the following addition to the recommendation on airways: A distinction should be recognized between the urgency of developing military aviation as compared with governmental promotion of civil air transport. The development of socialistic competition between air transport companies and existing privately owned and operated agencies of transportation should be avoided."

The recommendation that the regulation of air transport be continued "for the time being" in an agency separate from that having jurisdiction over other carriers was another proposal with which Mr. Gurley disagreed. He believes that "a sound transportation policy requires regulation of all forms of transportation on a fair and equal basis by one agency."

In addition to Messrs. Gurley and Woodruff, the committee which made the report has 25 other members, including C. McD. Davis, president of the Atlantic Coast Line and L. O. Head, president of the Railway Express Agency. The chairman is Evans A. Nash, president, Yellow Transit Company, Oklahoma City, Okla. The report will be considered at the chamber's annual meeting to be held in Washington, D. C., April 26-29.

March Employment

Railroad employment increased 0.42 per cent — from 1,311,518 to 1,317,026 — during the one-month period from mid-February to mid-March, but the mid-March total was 0.64 per cent below that of March, 1947, according to the preliminary summary prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The index number, based on the 1935-39 average, was 132.3 for March, as compared with 131.7 for February, and 133.2 for March, 1947.

March employment was above that of March, 1947, in three categories, the increases ranging from 0.58 per cent in the maintenance of equipment and stores group to 2.51 per cent in the executives, officials and staff assistants category. The decreases ranged from

0.64 per cent in transportation (train and engine service), to 5.67 per cent in transportation, other than trains, engine and yard.

As compared with February, employment in March increased in five groups, the increases ranging from 0.04 per cent in the professional, clerical and general category to 1.37 per cent in the maintenance of way and structures group. The only decreases were 0.38 per cent in transportation (train and engine service), and 1.45 per cent in transportation (yardmasters, switchtenders and hostlers).

Money for I.C.C. and Roads Administration

President Truman on April 20 signed the recently enacted Independent Offices appropriation bill for the fiscal year ending June 30, 1949. It carries $10,894,317 for the Interstate Commerce Commission and $435,588,854 for the Public Roads Administration.

Re-Equipped "Riley" in Service

A completely re-equipped "James Whitcomb Riley" made its initial run on the New York Central between Cincinnati, Ohio, Indianapolis, Ind., and Chicago on April 14. The all-coach train consists of 11 cars of the latest design, including two dining cars built by the Budd Company, seven coaches, an observation-lounge car and a combination baggage car and coach, all built by the Pullman-Standard Car Manufacturing Company.

The new dining cars each seat 44 passengers, and the coaches accommodate 64. The new observation car consists of three sections—a club section at the forward end seating 22 persons, a lounge section in the middle accommodating 21 passengers and an observation section at the rear for an additional 10 passengers.

Pullman Gets Tariff Relief For Rate-Increase Proposal

Division 2 of the Interstate Commerce Commission has issued a "special permission" granting the Pullman Company relief it sought from tariff rules in connection with its plan to publish increased rates for room and seat accommodations. The permission authorizes publication of the proposed increases in master-table form, but on the statutory 30-days notice; it "makes no finding as to the reasonableness of nor approves the proposed changes, which are subject to protest and possible suspension."

Another provision of the relief order stipulates that the special permission will be void unless the master-table supplements are issued within 30 days from April 15. It is also stipulated that no fourth-section relief is granted. In the latter connection, the division had previously denied that phase of the Pullman application which sought temporary authority to establish the increased rates without observing the aggregate-of-intermediates provision (see *Railway Age* of April 3, page 58). The special-permission order applying to Pullman was accompanied by another granting like relief to tariff-publishing agents of the Canadian National, Canadian Pacific, and Minneapolis, St. Paul & Sault Ste. Marie.

Indicates Types of Cars Used for 1947 Loadings

The Bureau of Transport Economics and Statistics of the Interstate Commerce Commission has issued a tabulation showing, on a one-per-cent-sample basis, the number of carloads of each commodity class moved in various types of cars during the first and second quarters of 1947. The compilation, Statement No. 489, is one of the bureau's so-called waybill studies.

Like others in the series, it employs data taken from waybills submitted in response to the commission's September 6, 1946, order requiring Class I roads to file all audited waybills representing their carload terminations which are numbered "1" or with digits ending in "01." The classification shows for each commodity class the loads moving in the following types of cars: Box, stock, gondola, hopper, flat, refrigerator, tank, and special.

March Revenues 6.2 Per Cent Above Those Reported in 1947

From preliminary reports of 82 Class I railroads, representing 82.2 per cent of total operating revenues, the Association of American Railroads has estimated that the March gross amounted to $626,404,338, an increase of 6.2 per cent above the $590,078,167 reported for the same 1947 month. Estimated March freight revenues amounted to $518,230,690, as compared with $485,683,975, an increase of 6.7 per cent, while estimated passenger revenues amounted to $59,709,437, as compared with $58,672,910, an increase of 1.8 per cent. The estimate for all other revenues was $48,464,211, as compared with $45,721,282, an increase of 6 per cent.

I.C.C. Organizes for Role Under "Mahaffie" Act

The Interstate Commerce Commission has amended the rules and regulations relating to its organization and assignment of work in order to provide for its functions under the recently enacted legislation which adds to the Interstate Commerce Act a new section 20b, setting up procedures for the voluntary readjustment of railroad financial structures along lines of the former Chandler and McLaughlin Acts. Under the commission's order, matters arising under the new law will be assigned to Division 4 and to the Bureau of Finance's Loan and Reorganization Section.

Provisions of the new legislation, Public Law No. 478, were outlined in the *Railway Age* of April 17, page 57. On its way through Congress it became known as the "Mahaffie bill" because it was framed on the basis of recommendations submitted by Commissioner Mahaffie, who is chairman of Division 4.

Railroads Object to Head-End Car Safety Bill

Opposition to H.R.4092, a bill introduced by Representative Bennett, Republican of Missouri, to give the Interstate Commerce Commission authority to prescribe "adequate standards of safety and sanitation" for baggage, express or mail cars operated by the railroads, was voiced by carrier spokesmen on April 16, at which time hearings on that measure were concluded before the House committee on interstate and foreign commerce. Proponents had testified at earlier hearings reported in *Railway Age* of March 27, page 68. Hearings on a similar Senate bill, S.1635, sponsored by Senator Johnson, Democrat of Colorado, are scheduled to start May 11 before a subcommittee of the Senate committee on interstate and foreign commerce.

G. S. Prince, assistant general solicitor of the Association of American Railroads, and principal witness for the railroads, told the committee that, in its "true nature," the bill is based upon a complaint by employees as to working conditions in the cars involved (such as the alleged lack of toilets, wash basins and clothes lockers, inadequate lighting, difficulty in operating doors and lack of cleanliness) rather than to promote the safety and health of employees. He said that while the commission has made recommendations in its annual reports to Congress for the enactment of legislation requiring the installation of various safety devices, it never has sought legislation of the character proposed in the lull with the respect to the design or construction of headend cars or of passenger cars generally.

According to Mr. Prince, reports of all accidents investigated by the commission in the five-year period 1943-1947 involving passenger trains, and in which casualties resulted to employees in head-end cars, showed that in no case was the death or injury to any employee in such cars attributed to the faulty design or construction of the cars or to the unsafe condition of such cars or their equipment. "We think it clear," he added, "that no fundamental question of safety is involved."

Mr. Prince told the committee that negotiations are now being carried on between a railroad committee and the Brotherhood of Railway and Steamship Clerks with respect to working conditions in express cars. "These negotia-

tions," he said, "hold promise of a satisfactory solution of the demands of the express employees as to the equipment and facilities to be installed in newly constructed cars." The A.A.R. officer also pointed out that the railroads, because of the lack of steel, have been unable to build or purchase new cars in anything like the quantity desired. "This," he said, "is the basic underlying difficulty and the passage of this bill would in no way tend to cure this situation . . . . The railroads will do something about this situation as soon as it is practicable to do so . . . and this proposed legislation cannot correct the basic difficulty."

J. M. Hood, president of the American Short Line Railroad Association, also appeared in opposition to the bill, saying that "in the event that favorable consideration is given to it, we urge an exemption on short and branch lines of less than 100 miles in length." Mr. Hood also said that approval of the measure would in effect, deprive patrons of short and branch line roads of express, mail and baggage service. "As is well known to almost everyone," he said, "most of these short lines have difficulty in maintaining service of any character, and they are particularly vulnerable as to the future maintenance of passenger cars, including head-end service comprising mail, baggage and express. It is obvious that they cannot acquire what may be called the safest, most modern type of equipment. The cost of one car meeting these specifications would in many cases exceed the entire gross revenue of the carrier for a whole year's operation of both freight and passenger service."

Among others appearing in opposition to the measure were C. I. Clugh, assistant chief of motive power, Pennsylvania; J. W. Rada, manager of mail, baggage and express traffic, Illinois Central; and C. F. Rank, manager of the mail, express, baggage and milk traffic department, Chicago, Milwaukee, St. Paul & Pacific. Their general conclusion also was that a solution to the conditions complained of could best be met through negotiations between railroad unions and management.

The committee also received a supplementary statement filed by Hartman Barber, general representative of the clerks' brotherhood, who proposed an amendment to the bill designed to eliminate any possible conflict in authority between the commission and the United States Public Health Service with respect to interstate quarantine regulations. The Public Health Service had asked for such a provision.

Passes on Post-Ex-Parte-162 Adjustment of Grain Rates

Tariffs whereby the railroads proposed to adjust the Ex Parte 162 rate increase on grain and grain products in order to restore gateway and other equalizations that were disrupted by the uniform 15 per cent increase that became effective January 1, 1947, have been approved in part and rejected in part by Division 2 of the Interstate Commerce Commission. The report was in I. & S. Docket No. 5465.

The proceeding grew out of the railroads' undertaking to comply with that part of the commission's Ex Parte 162 report which permitted the 15 per cent increase to be applied to the grain rates with the understanding that the disrupted relationships would be restored with subsequent readjustments designed "to reflect an average increase as closely equivalent to a 15 per cent increase in revenue as may be practicable."

Protestants against the tariffs did not claim that the proposed rates would not restore the relationships, but they alleged violation of the commission's admonition that the readjustments should reflect an average revenue increase of 15 per cent. The commission findings, which disapproved part of the railroad proposal, were without prejudice to the filing of new schedules publishing rates of one-half cent to 1½ cents lower than those condemned.

I.C.C. Completes Work Of Fixing Municipal Zones

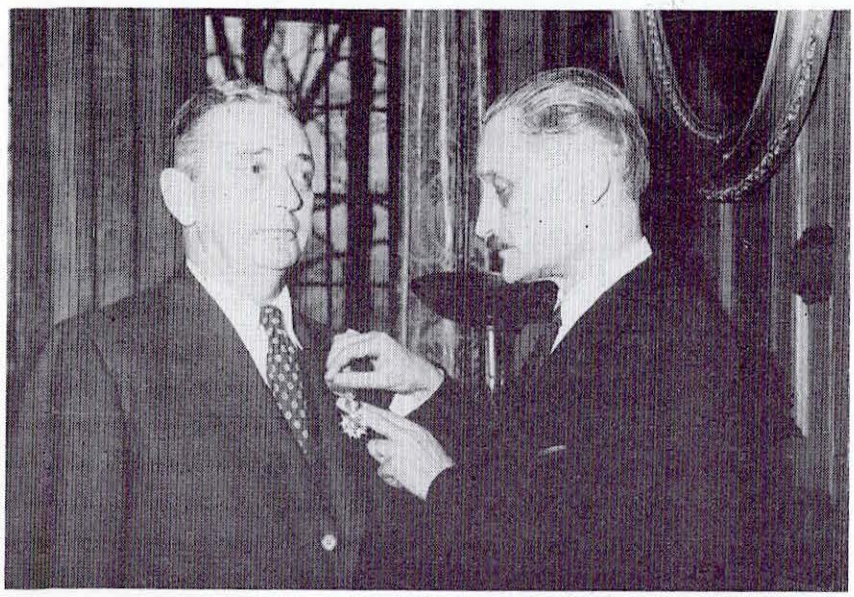
The Interstate Commerce Commission has completed its work of determining the limits of the commercial zones of the country's municipalities within which transportation by motor vehicle is conditionally exempt under section 203 (b) (8) from regulation, except as to qualifications and maximum hours of service of employees and safety of equipment. This was accomplished in a report by Division 5 which determined zones not previously fixed in prior reports or covered by the November, 1946, report wherein the commission laid down general principles for the determination of zones at municipalities not specifically dealt with.

The present report defines the zones of Baltimore, Md., Cleveland, Ohio, Detroit, Mich., Seattle, Wash., Albany, N. Y., Minneapolis-St. Paul, Minn., New Orleans, La., Pittsburgh, Pa., Portland, Ore., and Vancouver, Wash. The proceeding was docketed as Ex Parte No. MC-37.

Benefit Operations in February

Retirement and survivor benefit payments made during February amounted to $19,056,000—about $206,000 more than in January—but were not as high as the record amount paid in December, 1947 ,according to the April issue of the Railroad Retirement Board's "Monthly Review." At the end of the month there were 303,566 monthly benefits of all types in current-payment status, with an average retirement payment of $70.31 monthly and average survivor benefit of $25.49.

Unemployment claims received by the board in February declined 14 per cent from the January figure, while applications filed for certificate of benefit rights dropped 39 per cent. The $2,838,000 paid in benefits for 100,892 claim periods was 15 per cent less than the previous month.



Sidney S. Alderman (left), general counsel of the Southern, recently was awarded the rank of Chevalier in the National Order of the Legion of Honor by the French government. The presentation is being made by Ambassador Henri Bonnet at the French embassy in Washington, D.C. Mr. Alderman was honored in recognition of his efforts in behalf of French relief and the furtherance of cordial relations between the French and American governments

In its sickness benefit operations, the board recorded 19,187 applications and 71,225 claims, other than maternity, during the month, compared with 19,847 and 78,880, respectively, in January. Payments of $2,262,000 were made for 64,318 two-week claim periods. Maternity benefits totaling $166,000 were paid to 1,314 railroad women in February.

Santa Fe Issues New Timetable to Transcontinental Passengers

A new, easy-to-read timetable containing such information as rivers crossed, tunnels passed through and correct points at which to reset watches is being distributed by the Atchison, Topeka & Santa Fe to passengers on its transcontinental trains. The eastbound and westbound schedules of each of these trains are shown separately, on opposite pages, thereby requiring the passenger to read down only.

The tables, which are placed in all accommodations for use by the passengers, also include information on various train connections, time of river crossings, mileage, and altitudes. Tunnels are listed, together with their length and the time trains will pass through them.

Equipment on Order

Railroads and private car lines had 126,028 new freight cars on order on April 1, as compared with 121,936 on order on March 1, according to the Association of American Railroads. Of the former total, Class I roads and railroad-owned private-controlled refrigerator car companies had 111,044 new freight cars on order, as compared with 108,399 on order on March 1.

Cars on order by Class I roads and railroad-owned private-controlled refrigerator car companies on April 1 included 35,754 box cars, of which 35,404 were plain and ventilated and 350 automobile box cars; 46,277 hopper cars, including 4,104 covered hoppers; 18,399 gondolas; 3,125 flat, 5,924 refrigerator; 800 stock; and 765 miscellaneous freight cars. Of the total number of new freight cars which Class I roads had on order on April 1, 24,348 will be built in railroad shops and 86,696 in outside shops.

The Class I roads also had 1,550 locomotives on order on April 1, the most since August 15, 1923 when the number was 1,674. On April 1, 1947, there were 640 on order. The 1948 total included 119 steam, one electric and 1,430 Diesel-electric locomotives, as compared with 52 steam, six electric and 582 Diesel-electrics on April 1, 1947.

Class I roads and railroad-owned private-controlled refrigerator car companies put 22,770 new freight cars in service in the first three months of 1948, compared with 7,249 in the same 1947 period. Of the 1948 total, 7,252 new freight cars were installed in March. Those installed so far this year include: 11,002 box cars, of which 10,245 were plain and ventilated and 757 automobile box cars; 8,112 hopper cars, including 347 covered hoppers; 1,974 gondolas; 1,472 refrigerator; 42 flat; 50 stock; and 118 miscellaneous freight cars.

The Class I roads also put 287 new locomotives in service in the first three months of 1948, of which three were steam, three electric and 281 Diesel-electric. New locomotives installed in the same period last year totaled 220, of which 24 were steam and 196 Diesel-electric.

The Class I roads and railroad-owned private-controlled refrigerator car companies retired 14,369 freight cars in the first three months of 1948 of which number 5,849 were retired in March. In the same 1947 period, 11,497 cars were retired.

Steel Allocation Plan Accepted By 96 Railroads So Far

The Department of Commerce's Office of Industry Cooperation has received notices of compliance from 96 prospective railroad participants in the new "voluntary" agreement for the allocation of steel for use in the freight-car building and repair program. The plan, which was framed to conform with Public Law 395, enacted December 30, 1947, supplants arrangements worked out last year by the Office of Defense Transportation and the steel industry.

There were 134 railroad participants in the latter; and the 38 which had not joined the O.I.C. plan as of April 20 included the Chicago, Burlington & Quincy; Chicago, Milwaukee, St. Paul & Pacific; and Chicago, Rock Island & Pacific. Representatives of these roads expressed opposition to the new set-up at the recent hearing held by O.I.C. (See *Railway Age* of March 27, page 58). A representative of the Atchison, Topeka & Santa Fe also expressed misgivings at the hearing, but that road's notice of compliance has been received.

Compliances have also been received from all but 2 of the 11 contract car builders which were participants in the O.D.T. plan, while all 32 of the interested steel producers have filed. It was stated further that compliance notices are also coming in from prospective participants among component parts manufacturers and private car lines. The O.I.C. requests for compliances were issued March 31, but no deadline date for the returns was set.

Freight Car Loadings

Loadings of revenue freight in the week ended April 17 totaled 785,668 cars, the Association of American Railroads announced on April 22. This was an increase of 101,816 cars, or 14.9 per cent, over the previous week (because of the partial resumption of coal production and increased ore loadings), a decrease of 80,176 cars, or 9.3 per cent, under the corresponding week last year, and an increase of 134,825 cars, or 20.7 per cent, over the equivalent 1946 week.

Loadings of revenue freight for the week ended April 10 totaled 683,852 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading
For the Week Ended Saturday, April 10

District	1948	1947	1946
Eastern	136,083	153,612	136,832
Allegheny ..	136,818	174,696	129,247
Pocahontas ..	21,942	36,488	21,577
Southern ...	117,333	122,063	115,700
Northwest. ..	103,866	93,968	77,722
Cen. West. ..	105,021	115,274	106,102
Southwest. ..	62,789	61,738	62,118
Tot. West. Dis.	271,676	270,980	245,942
Tot. All Rds.	683,852	757,839	649,298
Commodities:			
Grain and gr. products ..	37,177	45,731	35,299
Livestock ..	10,461	11,921	17,555
Coal	53,153	112,052	31,561
Coke	9,507	12,823	7,500
Forest prods.	42,494	45,145	43,700
Ore	41,940	27,198	9,832
Mdse. l.c.l. ..	113,002	125,688	130,288
Misc.	376,118	377,281	373,563
April 10 ...	683,852	757,839	649,298
April 3 ...	661,807	715,159	643,644
March 27 ...	664,375	829,392	809,142
March 20 ...	700,482	844,041	804,606
March 13 ...	797,033	841,147	799,906
Cumulative total, 15 weeks ..	11,202,042	11,990,731	11,025,921

In Canada.—Carloadings for the week ended April 10 totaled 77,851 cars as compared with 74,459 cars for the previous week and 71,312 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Tot. Cars Rec'd from Connections
Totals for Canada:		
April 10, 1948	77,851	36,193
April 12, 1947	71,312	37,503
Cumulative totals for Canada:		
April 10, 1948	1,081,270	538,884
April 12, 1947	1,022,933	560,111

Truck Rams "Texas Rocket"; Two Passengers Killed, 42 Injured

On April 14, at Kremlin, Okla., a heavy truck crashed into the side of the Chicago, Rock Island & Pacific's "Texas Rocket" en route from Kansas City, Mo., to Dallas, Tex. The collision caused three coaches to leave the rails and skid against a freight train standing on a siding, killing two passengers and injuring 42 others. The left sides were torn away from the coaches, two of which subsequently were damaged by fire .

I. C. Containers Make Near "Perfect Shipping" Record

Aluminium l.c.l. containers which are transferred mechanically between pick-up and delivery trailers and railroad flat cars without immediate handling of contents have made a remarkable contribution toward "perfect shipping" in experimental service on the Illinois Central, that company reports. Since the service was inaugurated between Chicago and Memphis, Tenn. on Feb-

ruary 2 (see *Railway Age* of January 31, page 54), a total of 595,925 lb. have been shipped in the containers; the only damage reported was breakage of one barrel of soap powder, and damage by water—probably incurred in loading—to two cases of candy. A total of 420 shipments were handled during the first 74 days of the service, the average weight of shipments being 1,419 lb.

North Western Receives Special National Safety Council Award

A special award for exceptional service in the field of safety was awarded to the Chicago & North Western by the National Safety Council at a luncheon in Chicago on April 20. R. L. Williams, North Western president, received from Ned H. Dearborn, president of the council, a certificate which reads: "A pioneer in safety, the Chicago & North Western has steadfastly sought over the years to protect its passengers and employees from accidents, with conspicuous success." The certificate cites R. C. Richards, the North Western's first safety director, who was a founder of the council, served on its first executive committee and later was its president.

Rock Island Remodeling Suburban Cars

A remodeled suburban passenger car of the Chicago, Rock Island & Pacific—the first such car to be refurnished at the road's Chicago shops—has been completed and will go into service within a few weeks. The car-remodeling is part of the Rock Island's plans to improve suburban service in the Chicago area.

The refurnished car is 70 ft. long and seats 100 persons. It has been equipped with "form fitting" seats covered with a plastic material, aluminum window frames, and a new interior paint job of enamel and battleship gray to enhance the lighting. Its doors have a roller installation to facilitate opening and closing. The trucks have been redesigned to provide smoother riding.

C.N.J. Commuters Willing to Pay for Air Conditioning

The patrons of the Central of New Jersey are satisfied with the arrival and departure times of the road's trains, it was announced this week as the C. of N.J. disclosed answers to a quesionnaire submitted to commuters last November. (See *Railway Age* of November 29, 1947, page 964). Approximately 32,000 questionnaires were distributed and 4,024 replies were received, according to Harry E. Yerkes, passenger traffic manager. Mr. Yerkes added that 923 patrons had expressed interest in a proposal whereby commuter clubs could lease air-conditioned coaches at a cost from the railroad and that negotiations for that purpose are under way with several groups. An announcement will be made shortly about the steps taken to put the air-conditioning program into effect and the cost of leasing the equipment.

R. W. Brown Delivers Newcomen Lecture on Daniel Willard

The life and times of Daniel Willard, president of the Baltimore & Ohio from January 4, 1910, to May 31, 1941, was the subject of an address by R. W. Brown, president of the Reading, delivered at a Newcomen Society dinner in St. Louis, Mo., on April 7. Mr. Brown, the guest of honor at the dinner, was introduced by R. B. White, president of the B. & O. The dinner was presided over by Frank A. Thompson, chairman of the St. Louis-San Francisco and chairman of the St. Louis committee of the Newcomen Society.

SUPPLY TRADE

Frank B. Powers has been elected assistant vice-president, engineering, of the **Baldwin Locomotive Works.** Mr. Powers was graduated from the University of Illinois in 1926. He was engineering manager for the transportation and generator division of the Westinghouse

Bachrach
Frank B. Powers

Electric Company until 1945 and subsequently was executive vice-president of Great American Industries, Inc. He joined Baldwin in January, 1947, as assistant to vice-president—operations and in July of that year he was given complete responsibility for all engineering activities of the Eddystone division.

Neil F. Ritchey, formerly metallurgical engineer for the General Electric Company at Fort Wayne, Ind., has been appointed an engineer in the technical service department of the **Reynolds Metals Company,** Louisville, Ky. The appointment of **Sublette M. Walton** as industry manager of the company's Alumi-Drome division, also was announced. Mr. Walton will be in charge of sales and all operation connected with Alumi-Drome.

Thomas C. Fleming, assistant to the president of the **Wine Railway Appliance Company,** since December, 1946, has been appointed vice-president. Mr. Fleming joined the company in 1941, before

Thomas C. Fleming

which he was assistant to the vice-president of the West-Penn Cement Company. In his new position he will remain assistant to the president of the Unitcast Corporation, of which Wine Railway is a division.

W. E. Falberg, formerly in charge of special steel sales for **Joseph T. Ryerson & Son** at the Cleveland, Ohio, plant, has been appointed manager of alloy and stainless sales at the company's plant in Chicago. **E. H. Bodenmann,** formerly a sales representative of the stainless steel department at Chicago, has been transferred to Cleveland to succeed Mr. Falberg.

C. C. McGraw, formerly manager for the **Graybar Electric Company** at Savannah, Ga., has been appointed manager at Knoxville, Tenn., to succeed the late **F. O. Andridge. R. L. Wear** has been appointed manager at Savannah and **A. W. Wheeler** has been appointed manager at Shreveport, La.

J. B. Hanks, formerly traveling locomotive inspector of the Illinois Central, has been appointed sales representative in the middle-south territory for the **Hunt-Spiller Manufacturing Corporation.**

Thomas H. Smith, formerly with the Pennsylvania, has been appointed sales representative for the **Collins Oil & Manufacturing Co.** and the **Walton R. Collins Company.**

James A. Farrell, Jr. and **William F. Van Deventer** have been elected to the board of directors of the **American Car & Foundry Co.** Mr. Farrell, president and a director of Farrell Lines, Inc., suc-

ceeds R. A. Williams, and Mr. Van Deventer, a member of the New York investment banking firm of Laidlaw & Co., succeeds Malcolm S. Mackay.

H. V. Huleguard, vice-president and general manager of the **Whitcomb Locomotive Company,** a subsidiary of the Baldwin Locomotive Works, has resigned.

Lisle F. Small, formerly president of the United Engineering Company, has joined the engineering division of the **Lima-Hamilton Corporation.**

The name of the **American Rolling Mill Company** has been changed to **Armco Steel Corporation,** Charles R. Hook, president, has announced.

Lyle I. Martin, formerly vice-president and chief engineer of the Morden Frog & Crossing Works, at Chicago, has been appointed assistant chief engineer of the **Ramapo Ajax Division** of the **American Brake Shoe Company,** with headquarters remaining at Chicago. **George F. Killmer,** formerly manager of sales for Mordon Frog, has been appointed sales representative for Ramapo Ajax, with headquarters at Chicago. **Russell W. Martin,** formerly assistant to the manager of sales of Morden Frog, has been appointed sales representative for Ramapo Ajax, with headquarters at Chicago Heights, Ill.

John B. Morrow, Jr., formerly plant superintendent of the **Southern Wheel Division, American Brake Shoe Company,** at Portsmouth, Va., has been appointed personnel manager for the division, with headquarters at New York.

The **Electro-Motive Division** of General Motors Corporation has announced an expansion of its engineering activities "to keep pace with the growth of the business." In connection therewith, **R. M. Dilworth,** chief engineer, has been appointed engineering assistant to vice-president; **E. W. Kettering,** assistant chief engineer, appointed to succeed Mr. Dilworth; and **L. F. Campbell,** chief production engineer, appointed executive engineer.

Webster B. Todd, formerly chairman of the board of Todd & Brown, Inc., has been appointed to the executive committee of **American Wheelabrator & Equipment Corp.,** at Mishawaka, Ind.

Alco Backlog $116,000,000

The American Locomotive Company's current backlog of locomotive orders—largely for Diesel-electric locomotives—is approximately $116,000,000, compared with $70,000,000 at the beginning of 1947, Duncan W. Fraser, chairman, told the stockholders at the annual meeting in New York on April 20. "The heavy demand for Diesel locomotives is expected to continue," Mr. Fraser said. "The present demand is not, in our opinion, a postwar boom, but a very practical recognition that Diesel-electric power is far more economical and efficient."

Gross sales of American Locomotive and its wholly-owned subsidiaries in 1947 totaled $110,528,621, compared with $115,074,123 in the preceding year, according to the recently-released annual report. Net profit was $4,420,923, compared with $6,808,532. (1946 earnings include $1,319,609 profit of the Montreal Locomotive Works for the four months ended on April 30, 1946—the approximate date of the sale of a minority interest—and dividends of $232,400 after that date, while 1947 earnings include only dividends amounting to $320,000). The reduction in 1947 earnings, the report added, was occasioned by a declining rate of steam locomotive production and heavy operating expenses necessary to convert part of the firm's existing steam facilities for the increased production of main-line Diesels. As the change-over progressed, however, earnings reflected greater efficiency and volume, the report said.

OBITUARY

E. M. Deems, vice-president and treasurer of the Railroad Accessories Corporation since he joined the company in 1922, died at his home in Forest Hills, N. Y., April 14. He was 65 years old.

Sydney B. Wright, Jr., vice-president of the Pullman-Standard Car Manufacturing Company, died on April 8 at his home in Westfield, Conn. He was 58 years old. Born in Newbury, Mich., and graduated from Cornell University, Mr. Wright had been with Pullman-Standard for 31 years.

ABANDONMENTS

Chesapeake & Ohio.—Reversing the recommendations set out in a proposed report by Examiner A. G. Nye (see *Railway Age* of February 14, page 75) Division 4 of the Interstate Commerce Commission has found that public convenience and necessity does not permit abandonment of this company's one-mile ferry line across the Ohio river between New Richmond, Ky., and New Richmond, Ohio. The commission said that abandonment of the ferry would cause "substantial inconvenience" to a "considerable number" of people and that the applicant has failed to show operation imposes an undue burden.

Great Northern.—Examiner A. G. Nye has recommended in a proposed report that Division 4 of the Interstate Commerce Commission find that public convenience and necessity does not permit abandonment by this company of a branch from Gerber, Mont., to Giffen, 12.6 miles, such finding to be made without prejudice to renewal of the application after one year "if it is shown that the branch cannot be operated without substantial losses."

Norfolk Southern.—This company has applied to the Interstate Commerce Commission for authority to abandon that portion of its Currituck branch from a point near Euclid, Va., to Back Bay, 16.2 miles, on which traffic handled in recent years has been "relatively nil."

Union Pacific.—Examiner J. S. Prichard has recommended in a proposed report that Division 4 of the Interstate Commerce Commission authorize this company to abandon its so-called Pleasanton branch, extending 22.1 miles from Boelus, Neb., to Pleasanton. The branch has not been operated since June 21, 1947, when severe floods devastated many bridges and portions of the track.

CAR SERVICE

Fourth Revised Special Car Order No. 48 has been issued by the Car Service Division, A.A.R. to prohibit any Class I western road from delivering to connections in home route "empty serviceable plain (XM) box cars of Eastern, Allegheny, Pocahontas, or Southern ownerships, except cars equipped with full end doors." The revised provisions became effective April 19, the order's prohibition having previously applied only to terminal or intermediate switching lines at junction points between western and eastern lines. The extension to all Class I western roads was in view of "prospective heavy box car requirements in Western territory" and for the purpose "of avoiding possible cross-haul between eastern-southern and western roads, and consequent loss in car days." The order further provides that if loading in accordance with Car Service Rules is not immediately available, such cars will be held for loading or moved to territory where loading may be obtained. If a surplus develops at any point, the holding road is required to call upon C.S.D. for disposition. Another provision stipulates that western box cars of the same type shall not be delivered to eastern lines but shall be disposed of "under reciprocal trading arrangements." In the absence of such arrangements, the cars are to be reported to the C.S.D. for disposition.

Special Car Order No. 49 has been issued by the Car Service Division, A.A.R., to expedite the return home from the East of plain box cars of the XM type owned by the Atchison, Topeka & Santa Fe; Chicago, Burlington &

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THE NEW YORK CENTRAL RAILROAD COMPANY

Review of the Year • 1947

The financial results of the Company's operations in 1947 reflect the continued lack of economic stability which affected the nation at large throughout the year. The cost of doing business, boosted by inflation, cut sharply into revenues produced by the rates and fares received for the transportation services we performed.

Freight traffic revenue attained an all-time high, exceeding even the war years, although this was accompanied by a further decline in passenger traffic revenue which fell to a level 26 per cent below the record high of 1944.

Net income: 36 cents a share

Despite the fact that total operating revenues were $703,340,527, up 14 per cent from 1946, net earnings were meagre, amounting to only three-tenths of one cent of every dollar taken in. Net income was $2,306,082, equal to 36 cents a share.

This figure, non-compensatory though it was, represents a substantial improvement over 1946, when there was a net deficit of $10,449,268. The 1947 profit figure includes $7,350,156 of credit adjustments in taxes, while the 1946 deficit was after a carry-back tax credit of $21,142,300 taken that year.

The outstanding factors precluding a better 1947 return were the continued decline in passenger traffic, further inflationary increases in operating costs and the inadequacy of rates and fares to meet these increased costs.

Passenger traffic revenue was $14,921,725 lower than in 1946, due principally to lower volume of travel in coaches. Pullman travel declined slightly, while low-revenue commutation traffic increased.

Operating expenses held in line

Operating expenses were $48,185,364 higher than in 1946. About 80 per cent—$38,221,873—of this increase was due, however, to larger unit costs of fuel and other materials and higher wage rates. Otherwise it was occasioned by heavier transportation requirements, as reflected in an increase of 5.2 per cent in freight train miles and 1.2 per cent in passenger train miles.

More rate relief is essential

While our revenues were augmented by increases in freight rates averaging about 18 per cent which became effective the beginning of 1947, and by further interim increases averaging 8.9 per cent effective October 13, as well as by increased passenger fares of approximately 10 per cent and further increased compensation for carrying mail and express, the relief thus afforded was insufficient to offset increased operating costs, despite the high volume of traffic.

Encouragement for the future is found in the recognition by the Interstate Commerce Commission of the need of the carriers for more adequate revenues. In the application pending before that body for increased freight rates, which for the eastern carriers would amount to an average of approximately 31 per cent, the Commission has, effective January 5, 1948, substituted over-all interim increases of approximately 17.5 per cent for the 8.9 per cent increase allowed last October, pending final decision which it is hoped will result in permanent increases adequate to the needs of the carriers.

Net railway operating income, before other income, miscellaneous deductions and fixed charges, amounted to a total of $24,519,561 for the year. While this is an increase of $9,072,342 over 1946, it produces a rate of return of only 1.4 per cent on the depreciated investment in railway property of the New York Central and leased lines used in transportation, including cash, materials and supplies.

Taxes over $50,000,000

Taxes continued to absorb a substantial part of our revenue dollar. The taxes accrued in 1947, totaled $52,435,502, an increase of $28,482,093, or 118.9 per cent over 1946, when the large carry-back tax credit was available. Included are payroll taxes for employe retirement and unemployment benefits of $31,985,446, an increase of $9,183,795, or 40.3 per cent over the previous year, largely attributable to the increase in rate from 6½ per cent to 8¾ per cent effective January 1, 1947, as required by the Crosser Act.

Extensive improvements under way

Improvements in our facilities and equipment to meet the transportation demands of the present and the foreseeable future have been in progress for some time. This is essential if our Company is to maintain its position in the transportation field. Our program includes the expanded utilization of modern Diesel-electric motive power, a large fleet of the most modern streamlined passenger cars, thousands of new and improved freight cars and substantial improvements in roadway and facilities, coupled with an intensive employe training program.

Debt increase slight

Our improvement program necessarily involves the expenditure of substantial sums of money, but it has been progressed with relatively little increase in the net amount of outstanding debt, and with a slight reduction in the total annual interest the Company must pay on such obligations.

During 1947 the Company retired at maturity or by purchase a total of $24,410,054 of debt. Offsetting this reduction, there were issued $29,400,000 of new equipment trust certificates. Interest requirements on annual basis, however, decreased $189,252.

Thus, at the end of the year total debt represented by capital obligations outstanding of the Central and its lessor companies was $854,212,012, compared with $849,222,067 at the end of 1946, a net increase of only $4,989,946.

Since the end of 1932 there has been a net reduction of $254,595,941 or 23 per cent, in the total outstanding capital obligation of the Company and its lessor companies. Interest, computed on an annual basis, on such obligations outstanding at the end of 1947, was $14,774,146 less than at the end of 1932, a reduction of more than 31 per cent.

Future prospects favorable

The outlook for 1948 necessarily is affected by developments in the national economy. Traffic prospects appear to be good. It is estimated that the demand for freight transportation will be substantially as heavy as in 1947. With the new modern equipment which will become available during the year, passenger traffic should be stimulated.

If our expectations with respect to the volume of traffic are realized and are accompanied by adequate rate increases and a leveling off of costs, the prospects for 1948 are favorable. However, to assure sound financial health, there must be established a more normal relationship than has been experienced in the last few years between the cost of doing business and the rates we receive for services performed. We have faith that this will be determined by enlightened public policy based on public recognition of the essential character of the railroads in a healthy national economy.

G. METZMAN,
March 31, 1948 ***President***

For copy of Annual Report containing Comparative Income Account, Balance Sheet, etc., address Public Relations Dept., New York Central System, 466 Lexington Avenue, New York 17, N.Y.

[Advertisement]

Quincy; Chicago, Rock Island & Pacific; Fort Worth & Denver City; Gulf Coast Lines; International-Great Northern; Missouri-Kansas-Texas; Missouri Pacific; St. Louis-San Francisco; Texas & New Orleans; Texas & Pacific; and Union Pacific. The order, which became effective April 19, was issued because of "impending heavy box car requirements in Southwestern territory . . . to provide adequately for the winter wheat movement starting in another few weeks"; and also "to enable the principal southwestern grain originating roads to recondition their box car supply for loading grain in advance of harvest." It provides that eastern, Allegheny, Pocahontas and southern roads must not use cars of the western ownerships listed above for loading, but must expedite their return home in short route or home route. There is an exception which permits loading of the cars with l.c.l. "when loading is performed by railroads provided cars are loaded to destinations on owner's rails or to any point in the states of Missouri, Nebraska, Kansas, Oklahoma and Texas." However, the cars "must not be delayed or backhauled to obtain such loading." When the cars are made empty at a western gateway point, not on their home road and off the direct home route, they are to be accepted by any of the western roads listed above "for prompt movement to owner under Car Service Rules."

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **St. Louis-San Francisco** has ordered 50 65-ft. 70-ton mill-type gondola cars from the Pressed Steel Car Company. A report that the road was considering the purchase of this equipment appeared in *Railway Age* of March 6.

The **Terminal Railroad Association of St. Louis** has ordered 14 cabooses from the International Railway Car & Equipment Co. Delivery of the cars is scheduled for the third quarter of 1948.

LOCOMOTIVES

The **Norfolk & Western** has ordered seven 2-8-8-2 and five 2-6-6-4 locomotives from its Roanoke, Va., shops at a total cost of approximately $3,000,000. Construction of the new locomotives will begin after the completion of the ten 2-8-8-2's, expected for next December, which were reported ordered in *Railway Age* of November 1, 1947, page 58. The new 2-8-8-2's will be compound Mallets of class Y6b, with simple tractive force of 152,206 lb. and a compound tractive force of 126,838 lb. The other five will be of class A, a single expansion articulated locomotive with a tractive force of 114,000 lb.

ORGANIZATIONS

The 84th regular meeting of the **Northwest Shippers Advisory Board** will be held on April 29, at the Masonic Temple in Watertown, S. D.

Dr. Frank B. Jewett, president of the National Academy of Sciences and former director of Bell Telephone Laboratories, will be the luncheon speaker at the annual convention of members of **Bituminous Coal Research, Inc.,** May 19 in Columbus, Ohio. Results of research in progress will be surveyed by Battelle Memorial Institute engineers and members of the headquarters staff of Bituminous Coal Research. The convention theme, "A Year of Accomplishment," will be carried through their descriptions of advances in the fields of coal-burning residential heating equipment, steam-locomotive improvement, steam plants, and smoke-abatement devices for industry.

The **Railroad Enthusiasts, New York Division,** will meet April 28, at 7:45 p.m. in room 5928, Grand Central Terminal. The guest speaker will be R. M. Edgar, assistant to president of the Boston & Maine, whose subject will be "25 Years of Progress on the Boston & Maine."

A meeting of the **Indianapolis Car Inspection Association** will be held at the Indianapolis, Ind., Union Station at 7 p.m., May 3.

A meeting of the **Canadian Railway Club** has been scheduled for May 10 at the Mount Royal hotel, Montreal, Que., at 8 p.m.

The **Car Foremen's Association of Omaha** has scheduled a meeting for May 13, at the Railroad Y.M.C.A., Council Bluffs, Iowa, at 6:30 p.m.

On May 13 the annual banquet of the **New England Railroad Club** will be held at the Hotel Statler, Boston, Mass., at 6:30 p.m.

The next regular meeting of the **Eastern Car Foremen's Association** will be held at the Engineering Societies Building, New York, on May 14 at 8 p.m. Francis B. Rykoskey, supervisor of shops, Baltimore & Ohio, will present a paper entitled "Modern Wheel Shop Performance."

At its 41st annual meeting held in Houston, Tex., on April 10 and 11, the **Passenger, Ticket & Freight Agents' Association of Texas** elected the following officers to serve during 1948: President, Jack V. Cooley, general agent, passenger department, New York Central, Houston; first vice-president, John Y. Cassell, assistant general freight agent, Akron, Canton & Youngstown, Dallas; second vice-president, Elza Curtis, general agent, passenger department, Chesapeake & Ohio, Dallas; secretary-treasurer, J. G. Hatcher, general agent Chicago, Milwaukee, St. Paul & Pacific, Dallas; and chairman of executive committee, Charles Sorg, Jr., general agent, Northern Pacific, Dallas.

The **Railway Business Woman's Association of Chicago** will hold its annual spring luncheon on May 1, in the grand ballroom of the Edgewater Beach Hotel.

The **Central Railway Club of Buffalo** will hold its annual Ladies Night Dance at the Hotel Statler, Buffalo, N. Y., on May 19, 8 p.m.

R. L. Kenyon, associate director of research laboratories of the American Rolling Mill Company, will present a paper entitled "Wheels" at the next meeting of the **Southern and Southwestern Railway Club,** May 20 at 10 a.m., at the Ansley hotel, Atlanta, Ga.

The annual meeting of the **Western Railway Club** is scheduled for May 27 at 6 p.m., at the Hotel Sherman, Chicago.

CONSTRUCTION

Central of New Jersey.—This road has contracted with the B. J. Lucarelli Co., Jersey City, N. J., for alterations on two of its buildings at the Elizabethport, N. J., shops at a total cost of $387,466. One of the buildings, now used as a locomotive machine erection and boiler shop, will be converted into a Diesel-electric locomotive shop at a cost of $372,600. The other building will be changed from a freight car repair shop to an engine traction motor repair shop at a cost of $14,866.

Missouri Pacific.—This road has awarded a contract to the Guido Brothers Construction Company of San Antonio, Tex., for the building of a 74-ft. by 660-ft. freight station at Laredo, Tex. It is expected that the structure, containing some 49,000 sq. ft. of floor space, will be in use by October 1.

The office section of the new station will cover 2,500 sq. ft. and will be of frame construction, with asbestos siding and roof. The warehouse portion of the building will be constructed of fireproof material, including brick fire-walls. A 60-ft. clear-span steel-truss roof will be erected over the main warehouse. Approximately 4,600 sq. ft. of open dock space will be provided at car-door level.

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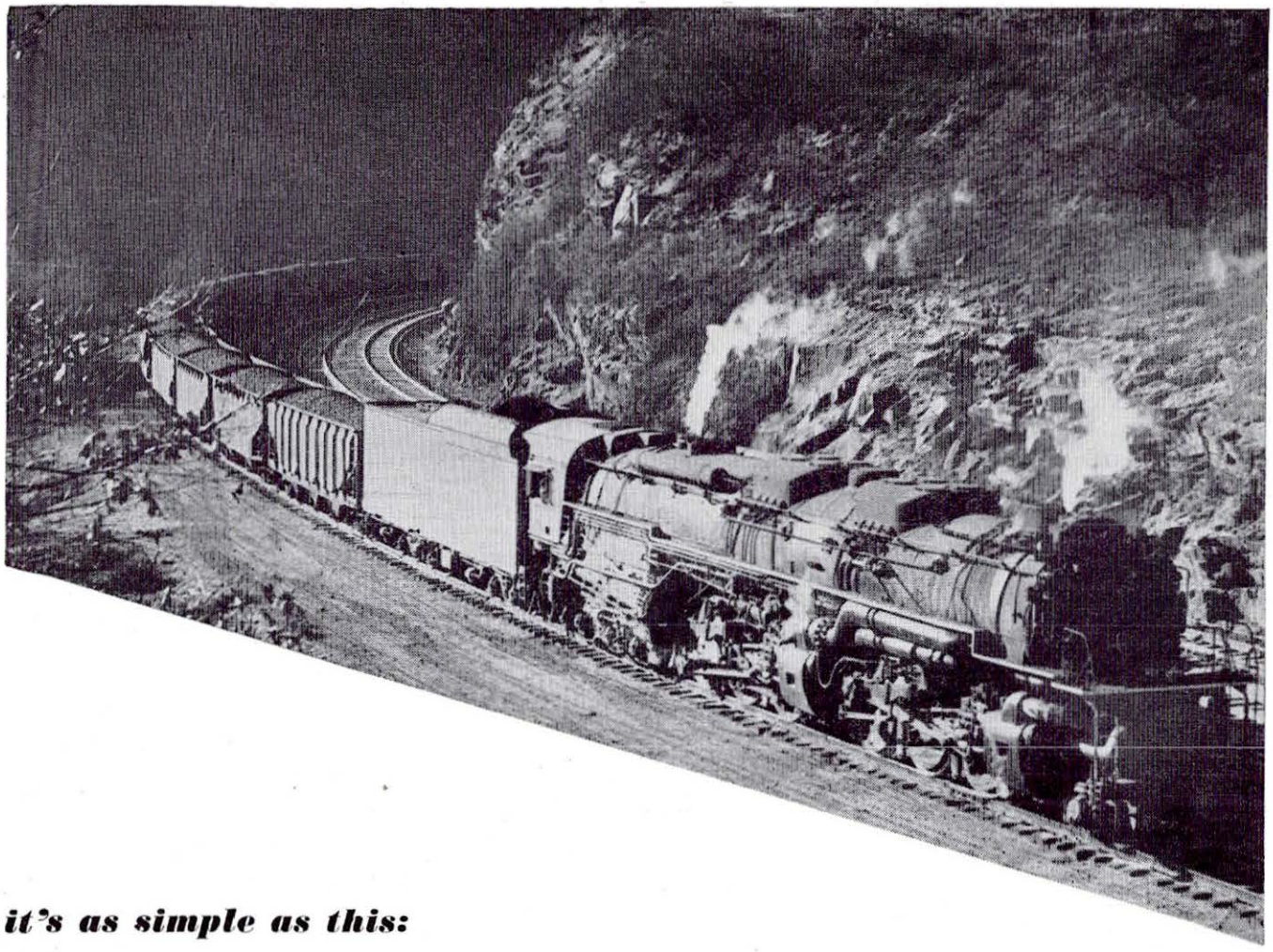

it's as simple as this:

MORE *with* FEWER

Last year, while some 2000 steam locomotives were being retired, the revenue ton-miles moved by steam reached 570 billion.

Here are two apparently opposing facts: The number of steam locomotives on Class I railroads hit a 30-year low. The number of ton-miles moved by these locomotives, on these roads, hit a peace-time high. Obviously the remaining locomotives averaged more time on the road. And, also obviously, the modern portion of that power—both new and rebuilt—raised that average.

It's as simple as that.

We built a substantial number of the modern locomotives that helped set that record. They have proved their ability, with planned scheduling, to stay on the road for 16 and 18 hours at a stretch—and to be ready for reassignment, with planned servicing facilities, in an hour or two. We are continuing to build such locomotives—progressively better, more reliable, and with even greater capacity for work.

LIMA HAMILTON CORPORATION

DIVISIONS: *Lima, Ohio* — Lima Locomotive Works Division; Lima Shovel and Crane Division. *Hamilton, Ohio* — Hooven, Owens, Rentschler Co.; Niles Tool Works Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

The new building—which will accommodate both inbound and outbound departments—will replace facilities built in 1908. The increasing flow of traffic between the U. S. and Mexico via the Laredo gateway necessitates the erection of the new station.

FINANCIAL

C. & O. Stockholders Reject Attack on R. R. Young Policies

Chesapeake & Ohio stockholders, at their annual meeting in Richmond, Va., on April 20, overwhelmingly rejected three proposals offered by George S. Jackson of New York, who holds, jointly with his wife, 550 shares of C. & O. common stock. The vote on a proposal asking the company to send a complete report of the meeting to stockholders was 5,153,591 against, 432,561 for; and a proposal demanding the withdrawal of the C. & O. from the Federation for Railway Progress was defeated 5,137,995 to 335,194. (See *Railway Age* of April 3, page 60, for the reasons given by the road's management for asking the stockholders to vote against these resolutions.) Mr. Jackson's third resolution proposed the appointment of a two-man committee to investigate the expenditures of Robert R. Young, chairman of the C. & O.'s board, and was turned down by 5,681,663 votes to 4,313. Mr. Jackson also read into the record a statement which, in part, compared the respective financial positions of the C. & O. and the Norfolk & Western at the end of 1947 and at the end of 1941. The latter year was chosen, his statement said, because "it was not until near the end of 1941 that Robert R. Young gained actual control over our board of directors, and shortly thereafter began to effect changes in management. . . Furthermore, by comparing our company with its direct competitor . . . it is possible to appreciate the serious extent to which our company's financial status and ranking have suffered." According to a table attached to his statement, cash earnings available to the holders of C. & O. common stock was 15.8 per cent less in 1947 than in 1941, while cash earnings available to N. & W. common stockholders showed an increase of 29.7 per cent.

Boston & Maine.—*Annual Report.*—Operating revenues of this road in 1947 amounted to $84,277,139, an increase of $7,109,989 over the preceding year. Operating expenses were $66,484,620, an increase of $2,358,297. Fixed charges totaled $3,472,329, a decrease of $315,640. Net income was $3,196,231, an increase of $1,231,583. Current assets at the end of the year were $28,916,295, compared with $26,365,236. Current liabilities were $18,465,759, compared with $14,727,050. Long term debt was $105,182,829, compared with $106,180,120.

Chicago & Western Indiana.—*Annual Report.*—Operating revenues of this road in 1947 amounted to $169,432, compared with $139,754 in the preceding year. Operating expenses totaled $506,810, compared with $336,227. Fixed charges were $2,733,605, compared with $2,767,962. Net income was $275,737, compared with $295,739. Current assets at the end of the year were $4,294,086, compared with $4,173,000. Current liabilities were $3,122,371, compared with $2,926,173. Long term debt was $79,966,542, compared with $79,747,880.

Erie.—*Annual Report.*—Operating revenues of this company last year totaled $152,101,381, compared with $127,836,171 in 1946. Operating expenses amounted to $119,948,838, compared with $109,713,187. Fixed charges were $4,950,301, compared with $4,913,028. Net income was $4,860,350, compared with $2,994,724.

Illinois Terminal.—*Annual Report.*—Operating revenues of this road totaled $11,899,083 in 1947, compared with $9,569,259 in the preceding year. Operating expenses amounted to $7,976,348, compared with $7,149,253. Fixed charges were $557,816, compared with $560,663. Net income was $1,263,689, compared with $487,162. Current assets at the end of the year were $5,511,640, compared with $4,087,674. Current liabilities were $4,010,967, compared with $2,705,809. Long term debt was $14,548,000, compared with $14,150,000.

Lehigh & Hudson River.—*Annual Report.*—Operating revenues of this road last year totaled $3,060,422, compared with $2,787,226 in 1946. Operating expenses were $2,213,634, compared with $2,048,973. Net income amounted to $252,299, compared with $260,404. Current assets at the end of the year were $1,293,825, compared with $1,137,499. Current liabilities were $301,906, compared with $233,925.

Lehigh Valley.—*Annual Report.*—Operating revenues of this road last year amounted to $72,670,962, compared with $67,007,685 in 1946. Operating expenses were $60,410,987, compared with $55,143,234. Fixed charges totaled $7,016,287, compared with $6,746,142. The net deficit was $1,482,151, compared with net income of $108,102. Current assets at the end of the year were $23,004,827, compared with $24,555,335. Current liabilities were $9,566,535, compared with $11,075,904. Long term debt was $93,852,721, compared with $94,066,512.

C. A. Major, president, has advised holders of the road's first mortgage bonds maturing on June 1 that arrangements have been made for the purchase of the bonds at their face value on and after April 15 by the Consolidated Real Estate Company, a subsidiary of the Lehigh Valley. The purchase price will include interest to the date of maturity. In his letter to the bondholders Mr. Major said: "It is likely that this company will soon promulgate a plan of debt readjustment, either pursuant to appropriate statutes then in effect or otherwise, to provide for other prospective maturities and achieve a sounder financial structure in other respects."

Lehigh Valley.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to extend two years to June 1, 1950, the maturity date of $5,000,000 of first mortgage bonds, of which $47,000 are held by the Consolidated Real Estate Company, a subsidiary of the applicant, and the remainder by the public. The bonds will continue to bear interest at the rate of 4 per cent. In view of relatively early maturities totaling $46 million, the company contemplates proposing a debt-adjustment plan in order to provide for their payment and, at the same time, to achieve a sounder financial structure in other respects. Provisions for such voluntary readjustments were added to the Interstate Commerce Act by the recently enacted "Mahaffie" bill.

Norfolk & Western.—*Annual Report.*—Operating revenues of this road last year totaled $165,861,514, compared with $129,714,096 in 1946. Operating expenses were $109,373,838, compared with $92,333,968. Net income was $35,331,896, compared with $27,727,675. Current assets at the end of the year amounted to $92,590,581, an increase of $10,711,468. Current liabilities were $46,110,352, an increase of $4,999,552. Long term debt was $48,016,631, a decrease of $1,766,500.

St. Louis Southwestern.—*Notes.*—This company has applied to the Interstate Commerce Commission for authority to reset the dates for payment of the installments due January 1, 1954, to January 1, 1970, inclusive, on a note held by the Southern Pacific, so that those maturities, now aggregating $16,482,250, will be represented by 32 semi-annual maturities of $500,000 each, due on January 1, 1949, to July 1, 1964, inclusive, and one maturity of $482,250, to be due January 1, 1965. The interest rate also would be reduced from 3 per cent to 2½ per cent per annum. The changes in the obligation will be evidenced by a so-called Agreement Amending Note. As collateral security for the payment of principal and interest on the $16,482,250 note, the applicant will continue to pledge with the S.P. $474,000 principal amount of Southern Illinois & Missouri Bridge first mortgage 4 per cent bonds, and St. Louis Southwestern general and refunding mortgage 5 per cent series A gold bonds in such amounts at market value at the date the refunding be-

News Department continued on next left-hand page

Santa Fe

NO. 3752

Built — 1928
Type 4-8-4
Service — Passenger and Freight
Cylinders 30" x 30"
Driving Wheels 80"
Boiler Pressure 230 lbs.

modernized with

The Franklin System of Steam Distribution . . . TYPE B

On February 4th, Santa Fe's modernized 4-8-4 type locomotive, No. 3752, re-entered service and is being used on both freight and passenger runs.

This locomotive is equipped with the Type B Franklin System of Steam Distribution as described in Franklin Bulletin No. 28 and as demonstrated at the Atlantic City and Chicago Conventions. Crank-supported Driving Gear Boxes are used, and one intake and two exhaust poppet valves are employed for each end of each cylinder.

In addition to fuel and water savings and increased horsepower, Santa Fe is looking forward to time saving made possible by quicker acceleration and higher operating speeds on grades. With the simplicity of this design, with all drive parts located on the outside, and with improved drifting conditions, valve-gear and machinery maintenance will be reduced and locomotive availability substantialy increased.

FRANKLIN RAILWAY SUPPLY COMPANY

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

comes effective as will equal 125 per cent of the face amount of the indebtedness.

Smoky Mountain. — *Reorganization.* — Frank Maloney, trustee of this road, has asked the Interstate Commerce Commission to formulate a plan of reorganization under section 77 of the Bankruptcy Act for this road. The debtor, meanwhile, has asked the commission to act on a petition filed in March, 1947, seeking permission to abandon the road. It recalled that a plan of reorganization filed by it in November, 1947, was found by the commission to be "prima facie impracticable" and that the commission, at the same time, found that the debtor had failed to demonstrate any permanent earning capacity.

Warrior River Terminal.—*Merger.*—Division 4 of the Interstate Commerce Commission has authorized the merger of the properties and franchises of this company into the Inland Waterway Corporation for ownership, management and operation. The purpose of the merger, is to enable the I.W.C. to continue the services performed by the terminal company, pursuant to the Government Corporation Control Act of 1945 which requires that no wholly-owned government corporation created under the laws of any state shall continue as an agency or instrumentality of the United States after June 30. The I.W.C. owns all outstanding stock of the terminal company, while the federal government owns all outstanding capital stock of the I.W.C.

Waterloo, Cedar Falls & Northern.—*Dividend.*—This road paid on April 15 a dividend of 35 cents a share on the common stock. The two previous payments were 50 cents a share on April 7, 1947, and on April 15, 1946.

New Security Issues

The following **applications** have been filed with the Interstate Commerce Commission for authority to issue new securities:

Illinois Central.—To assume liability for $14,000,000 of series Z equipment trust certificates, the proceeds of which will be used to replenish the applicant's treasury for funds expended for the purchase of $13,647,500 in bonds and to replenish the applicant's working capital, which it has reduced 32 per cent since January 1. The bonds, together with other funds, had been applied toward the purchase of equipment amounting to $20,399,847, including 3,073 freight cars, 31 coaches, 20 lightweight passenger cars, 14 steam locomotives, 14 1,000-hp. Diesel-electric switching locomotives, 1 2,000-hp. Diesel-electric switching locomotive, 10 600-hp. Diesel-electric switching locomotives and 14 2,000-hp. Diesel-electric passenger locomotives. The certificates will be dated April 1 and will mature in 20 semi-annual installments of $70,000, starting October 1.

Mississippi Central.—To issue $1,000,000 of first mortgage, 4 per cent 30-year bonds and 111,210 shares of 5½ per cent, non-cumulative first preferred stock, par value $10 per share. The bonds will be dated April 1, will bear interest semi-annually at 4 per cent and will mature April 1, 1978. The applicant proposes to exchange the bonds and stock for $1,437,100 of its outstanding first mortgage 5 per cent bonds, due July 1, 1949, and for $675,000 of its second mortgage 6 per cent notes, due in 1944, and of which $644,663 was due as of last December 31.

Southern Pacific.—To assume liability for $11,100,000 of series X equipment trust certificates, the proceeds of which will be applied toward the purchase of the following equipment:

Description and Builder	Estimated Unit-Cost
3 6,000-hp. Diesel-electric passenger locomotives (American Locomo-Co.)	$655,000
10 6,000-hp. Diesel-electric freight locomotives (Electro-Motive Division, General Motors Corporation)	617,363
10 1,000-hp. switching locomotives (Baldwin Locomotive Works)	97,097
1,000 drop-bottom gondola cars (Bethlehem Pacific Coast Corp.)	4,851
500 flat cars (American Car & Foundry Co.)	4,350
100 covered hopper cars (General American Transportation Corp.)	5,331

The certificates would be dated May 1, sold on the basis of competitive bidding and mature in 10 annual installments, starting May 1, 1949.

Division 4 of the I.C.C. has **authorized** issuance of these securities:

Pennsylvania.—$10,995,000 of series S equipment trust certificates, third and final installment of an overall issue of $32,910,000 of series S certificates, to finance in part the purchase of equipment estimated to cost $12,715,000. Equipment includes eight 6,000-hp. Diesel-electric freight locomotives, six 6,000-hp. Diesel-electric passenger locomotives, nine 600 or 660-hp. Diesel-electric switching locomotives, three 1,000-hp. Diesel-electric switching locomotives, six passenger cars and 400 box cars, as described in *Railway Age* of January 31, page 68. Certificates will be dated July 1, 1947, and will mature in 15 annual installments of $733,000, starting July 1. The report also approves a selling price of 99.609 with a 2⅜ per cent interest rate, the bid of Halsey, Stuart & Co., on which basis the average annual cost will be approximately 2.43 per cent.

Dividends Declared

Georgia Banking Co.—$1.75, quarterly, payable April 15 to holders of record April 1.

Goshen & Deckertown.—40¢, annually, payable April 20 to holders of record April 13.

Little Miami.—original capital, $1.10; special guaranteed, 50¢, quarterly, payable June 10 to holders of record May 24; original capital, $1.10; special guaranteed, 50¢, quarterly, payable September 10 to holders of record August 24; original capital, $1.10; special guaranteed, 50¢, quarterly, payable December 10 to holders of record November 24; original capital, $1.10; special guaranteed, 50¢, quarterly, payable March 10, 1949 to holders of record February 24, 1949.

Illinois Central.—6% preferred, $3.00, payable May 15 to holders of record April 28.

Ontario & Quebec.—$3.00, semi-annually, payable June 1 to holders of record May 1.

Waterloo, Cedar Falls & Northern.—common, 35¢, payable April 15 to holders of record April 1; common, 35¢, payable July 15 to holders of record July 1; common, 35¢, payable October 15 to holders of record October 1.

Wheeling & Lake Erie.—4% prior lien, $1.00, quarterly, payable May 1 to holders of record April 22.

Average Prices Stocks and Bonds

	April 20	Last week	Last year
Average price of 20 representative railway stocks	51.41	50.69	45.63
Average price of 20 representative railway bonds	88.43	88.06	89.44

RAILWAY OFFICERS

EXECUTIVE

Willis T. Pierson, general counsel of the Erie at Cleveland, Ohio, has been appointed also vice-president.

OPERATING

T. E. Gilhooley, assistant to general manager of the Atlantic Coast Line, with headquarters at Wilmington, N. C., has been appointed assistant superintendent of the Columbia district, with headquarters at Florence, S. C.

A. A. Burkhardt, supervisor of stations and transfers of the New York Central at New York, has been transferred to Syracuse, N. Y., and **C. J. Hart,** assistant to the superintendent, stations and motor service at New York, has been appointed assistant supervisor of stations at Syracuse.

W. H. Jackson, whose appointment as superintendent of the Norfolk division of the Norfolk & Western at Crewe, Va., was reported in *Railway Age* of April 10, was born at Austinville, Va.

W. H. Jackson

He became a special apprentice in the Roanoke shops of the Norfolk & Western in June, 1923, later leaving to attend Virginia Polytechnic Institute, from which he was graduated. He served in various capacities in the Roanoke shops

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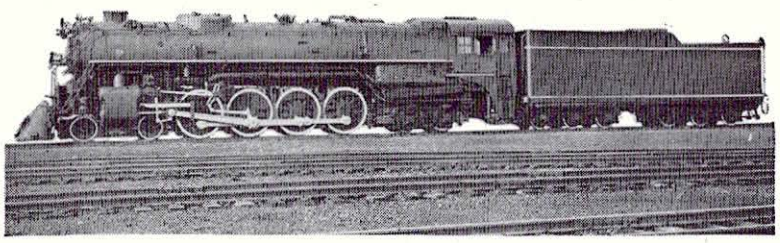
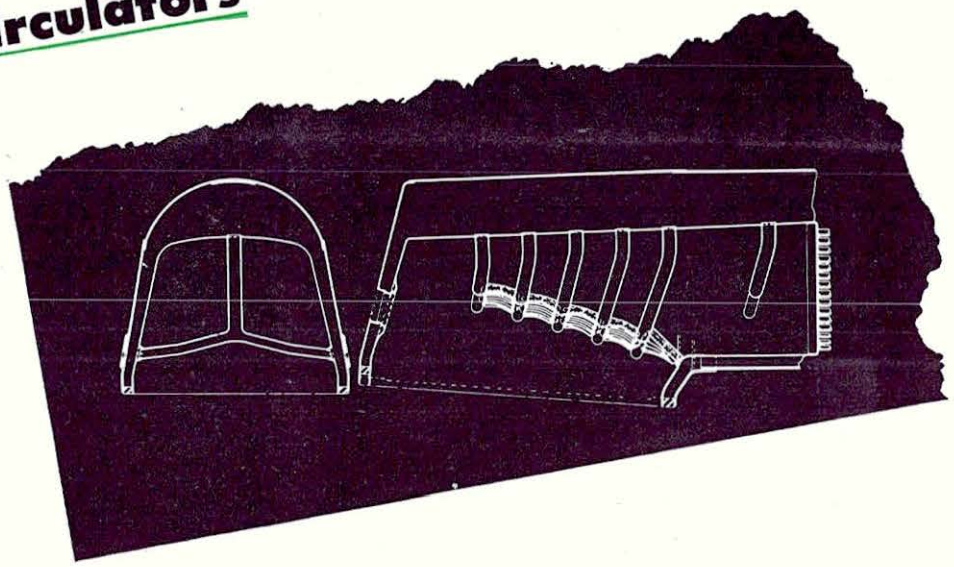


Heavy freight locomotives are being equipped with Security Circulators



Typical of the trend toward the use of Security Circulators in modernizing existing steam locomotives, many 4-8-4 freight locomotives are being Circulator-equipped.

In making such installations in existing motive power, the Security Circulators, as shown by the sketch, are suitably proportioned to the size and type of boiler to give the best results in bettering boiler performance and increasing locomotive utilization.

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

and in the office of the superintendent of motive power, transferring to Bluefield, W. Va., as a shop inspector in March, 1934. Mr. Jackson was assistant road foreman of engines on the Pocahontas and Norfolk divisions and was promoted to road foreman on the former division in December, 1938. Two years later he was appointed assistant trainmaster of the Scioto division. Mr. Jackson became assistant superintendent on January 1, 1942, and was transferred to the Pocahontas division in February, 1944, and to the Norfolk division in February, 1948.

Emil J. Hardesty, whose appointment as general manager of the Eastern Lakes department of the Railway Express Agency at Cleveland, Ohio, was reported in *Railway Age* of April 17, began his express career 43 years ago in Chicago. After serving in various capacities in the Midwest, he was appointed division superintendent at Spo-

Emil J. Hardesty

kane, Wash., in 1940, transferring to Cincinnati, Ohio, in August, 1941. The following year he became superintendent of organization at Chicago and in February, 1945, he went to Detroit as superintendent of the city division, in which capacity he served until his recent promotion.

L. A. Evans, division engineer at the Pennsylvania's terminal division at Philadelphia, Pa., has been appointed superintendent at Indianapolis, Ind., succeeding **W. G. Dorwart,** transferred to Cleveland, Ohio.

N. L. Dunning, assistant superintendent of terminals of the Louisville & Nashville at Nashville, Tenn., has been appointed superintendent of terminals at that point, succeeding **F. H. Berry.**

W. F. Koehn, whose appointment as general superintendent of the Ontario district of the Canadian Pacific at Toronto, Ont., was reported in the *Railway Age* of April 17, entered railroad service in 1916 in the maintenance of way department of the Canadian Pacific. From 1921 to 1938 he was bridge and building master at the Montreal terminals, then becoming division engineer of the Laurentian division. He served as assistant superintendent of

W. F. Koehn

the Laurentian division from March to July, 1944, then becoming superintendent of that division at Montreal. He was appointed superintendent terminals at Montreal in January, 1947, which position he held until his recent promotion.

A. G. Thernstrom, whose promotion to superintendent of terminals of the Grand Trunk Western, with headquarters at Port Huron, Mich., was reported in *Railway Age* of April 10, joined the road's staff at Port Huron in 1910. He

A. G. Thernstrom

became an accountant in the transportation department in 1916, and advanced to chief clerk in the following year. Mr. Thernstrom was further promoted to agent in 1933, which post he held at the time of his recent appointment.

J. H. Whelan, whose appointment as superintendent of transportation of the Grand Trunk Western at Detroit, Mich., was reported in *Railway Age* of April 17, was born at Lansing, Mich., on May 8, 1897. He began his railroad career in 1915 as a telegraph operator with the Ann Arbor at Owosso, Mich., and in the following year he joined the G. T. W. as telegraph operator at Durand, Mich. Mr. Whelan subsequently advanced through several positions to that of dispatcher in 1926, and was transferred to Battle Creek, Mich., in 1931. He became chief dispatcher at

J. H. Whelan

Battle Creek in 1936, operating inspector at Detroit in 1942 and superintendent of terminals at Chicago in 1945. Mr. Whelan was serving in the latter capacity at the time of his recent appointment.

A. C. McCarthy, whose appointment to the newly created position of general superintendent of the Grand Trunk Western, at Detroit, Mich., was reported in *Railway Age* of April 17, was born on December 15, 1897, at Detroit. He began his railroad career with the G. T. W. in 1918, as a demurrage inspector at Chicago, and advanced to

A. C. McCarthy

demurrage supervisor at Detroit in 1923. Mr. McCarthy became district supervisor of car service in 1927, which post he held until 1939, when he was promoted to superintendent of car service. In October, 1945, he was further advanced to superintendent of transportation, which post he held at the time of his recent appointment.

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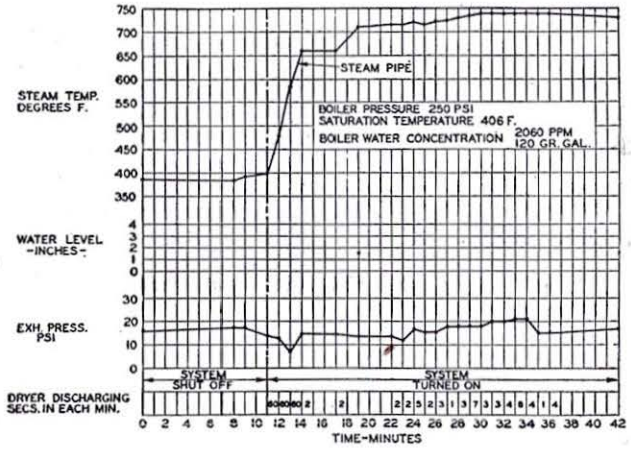
A Fuel Saver— the Elesco Steam Dryer System



TEST OF STEAM DRYER WITH DISCHARGE TO ATMOSPHERE

The steam consumption per i.hp-hr. obtained on a test with a modern high-speed freight locomotive, operating at 50% cutoff, showed the following results:

STEAM TEMPERATURE	STEAM PER I. HP-HR.	SAVINGS from the Use of Superheat
Saturated Steam	28 lb.	—
150 deg. Superheat	21 lb.	25.0%
200 " "	18 lb.	35.6%
250 " "	16 lb.	43.0%
350 " "	14 lb.	50.0%

Foaming is the major cause for carryover in locomotive boilers. Tests were made with bad foaming conditions and you will note from the chart that there was a loss of 300 deg. of superheat due to the intensity of this condition, with dryer shut off.

When the Elesco Steam Dryer System was in operation, the carryover was discharged and the steam temperature increased 300 deg.

The economy of superheat is indicated in the tabulation and it is apparent that the loss of 300 deg. of superheat increased fuel consumption by more than 25%.

With high fuel costs, take steps to stop fuel losses incident to carryover, by eliminating this condition. This can be most effectively accomplished with the **Elesco Steam Dryer System** — INVESTIGATE!

ELESCO

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.
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122 S. Michigan Ave., CHICAGO
Montreal, Canada, THE SUPERHEATER COMPANY, LTD.

A-1909

Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • Steam Generators • Oil Separators • American Throttles

P. T. Moran, superintendent of the Elgin, Joliet & Eastern, at Gary, Ind., has been appointed general superintendent at Joliet, Ill., succeeding **T. M. Molligan,** who has been granted a leave of absence. Mr. Moran is succeeded by **M. R. Joyce,** superintendent at Joilet.

G. E. Mayne, division superintendent of the Canadian Pacific at Schreiber, Ont., has been transferred to the Montreal, Que., terminals, succeeding **W. F. Koehn,** who has been promoted to general superintendent of the Ontario district.

TRAFFIC

I. C. Bruce, whose promotion to assistant general passenger traffic manager of the Chicago, Rock Island & Pacific, with headquarters as before at Chicago, was reported in *Railway Age* of March 20, was born at Mineola, Tex., on September 9, 1895, and entered railway service in 1913 with the Texas & Pacific at Longview, Tex., during summer school vacation. He held several minor positions with that road until 1917, when he enlisted in the U. S. Army air service to serve during World War I. In 1920 Mr. Bruce was appointed joint ticket agent at Fort Worth, Tex., of the Rock Island, the

I. C. Bruce

Southern Pacific and the St. Louis Southwestern. In 1921 he was appointed traveling freight and passneger agent of the Rock Island, with headquarters at San Antonio, Tex., later serving as traveling freight and passenger agent senger agent and general agent at various points on the road, until June, 1939, when he was promoted to assistant general passenger agent, with headquarters at Chicago. Mr. Bruce was advanced to general passenger agent in 1941 and to assistant passenger traffic manager in March, 1945, which post he held at the time of his recent appointment.

Robert E. King, whose promotion to general passenger agent of the Chicago, Rock Island & Pacific, at Chicago, was reported in *Railway Age* of March 20, was born on November 5, 1899, at Des Moines, Iowa. He began his railroad career in that city in 1916, as a ticket seller with the Des Moines Union, advancing to clerk in 1919. Mr. King

Robert E. King

joined the Rock Island in 1923, as city passenger agent at St. Paul, Minn. He became traveling passenger agent at Minneapolis, Minn., in 1927, district passenger agent at Indianapolis, Ind., in 1938, and general agent, passenger department, at Detroit, Mich., in 1942. In 1943 he was promoted to assistant general passenger agent at Chicago, which post he held at the time of his recent appointment.

Roy K. McDonald, whose promotion to general freight and passenger agent of The Missouri-Kansas-Texas of Texas at Fort Worth, Tex., was reported in *Railway Age* of March 20, was born

Roy K. McDonald

on September 10, 1906, at DeSoto, Mo. He entered the service of the Katy in 1925 as a yard clerk at Tulsa, Okla., and subsequently held various clerical positions at different points on the road. He became soliciting freight agent at Kansas City, Mo., in July, 1934, and in November of that year was made traveling freight and passenger agent there. In 1941 he was appointed commercial agent at Parsons, Kan., transferring to Kansas City in the following year. During World War II, Mr. McDonald served in the U. S. Army Transportation Corps, attaining the rank of captain. Following two years of overseas duty, he returned to the Katy in May, 1945, as commercial agent at Kansas City. He was advanced to division freight agent there in March, 1946, and to assistant general freight and passenger agent at Fort Worth in December, 1947. Mr. McDonald was serving in the latter capacity at the time of his new appointment.

Carl A. Larsen, whose promotion to assistant freight traffic manager of the Illinois Central, at Chicago, was reported in *Railway Age* of April 3, was born at Sioux City, Iowa, on January 22, 1909, and received his higher education from La Salle Extension University. He entered railway service in November, 1925, as a stenographer-clerk in the office of the division freight and passenger agent of the Illinois Central at Sioux City. In October, 1929, he was promoted to secretary to the

Carl A. Larsen

assistant general freight and passenger agent in Chicago, subsequently serving in numerous stenographic and clerical positions at that point until October, 1938, when he was advanced to chief clerk to the vice-president-traffic. On September 16, 1942, Mr. Larsen was promoted to office manger, and two years later he was further advanced to assistant to the freight traffic manager at Chicago. He was promoted to general freight agent in August, 1945, which post he held at the time of his new appointment.

T. W. Edwards, Jr., has been appointed assistant general passenger agent of the Seaboard Air Line, with headquarters at Birmingham, Ala., succeeding **J. N. Fisher.**

Charles A. Sublett, whose promotion to assistant freight traffic manager of the Illinois Central, at Chicago, was reported in *Railway Age* of April 3, was born at Farina, Ill., on August 26, 1898, and received his higher education at

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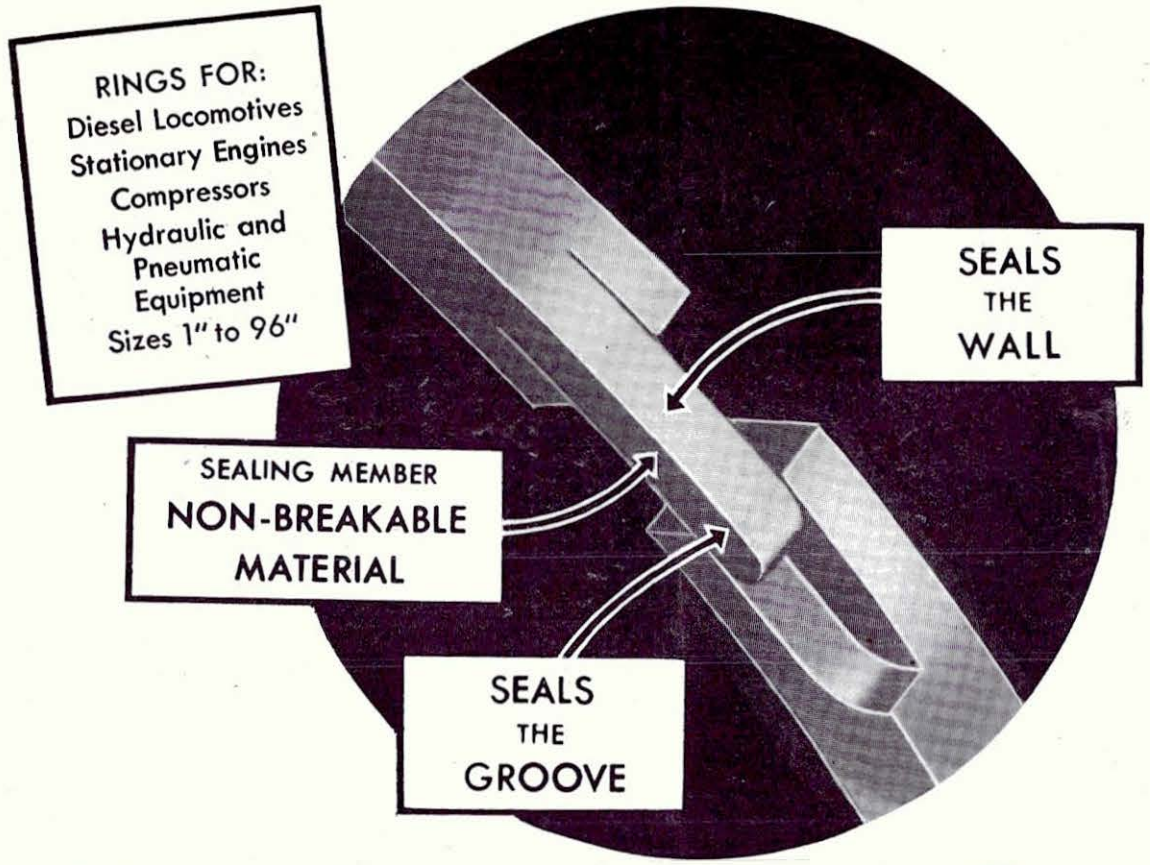

Hunt-Spiller Double Seal Rings

THE DIESEL FOREMAN KNOWS THE DIFFERENCE

He appreciates the increased power—the savings of oil—the positive compression which means improved lubrication with minimum carbon formation—and the fact that his engine runs longer between over-hauls with Hunt-Spiller Double Seal rings on the pistons because of their non-breakable alloy sealing member.

THE MASTER MECHANIC KNOWS THE DIFFERENCE

He knows HSGI means less wear. Because Double Seal Piston Rings are precision-machined from Hunt-Spiller AIR FURNACE gun-iron castings, they last longer. He knows that the Hunt-Spiller Double Seal Ring is the only compression-tight Diesel engine sealing ring with the strength of a plain ring.

THE MEN IN THE SHOP KNOW THE DIFFERENCE

They know lower wall pressure and NO BLOW-BY means less cylinder wear and that Double Seal Rings remain free in the grooves, making replacements quick and easy. Because of single-piece construction Hunt-Spiller Double Seal Rings are easy to install.

ALL SIZES AVAILABLE NOW. More than a million rings in stock. Rings made to specifications in 3 to 14 days.

Address all Ring inquiries to
DOUBLE SEAL RING COMPANY
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Cylinder Bushings	Valve Bull Rings	Dunbar Sectional Type Packing	Light Weight Valves
Cylinder Packing Rings	Crosshead Shoes	Duplex Sectional Type Packing	Cylinder Liners and Pistons
Pistons or Piston Bull Rings	Hub Liners	for Cylinders and Valves	for Diesel Service
Valve Bushings	Shoes and Wedges	(Duplex Springs for Above	Cylinder Snap Rings
Valve Packing Rings	Floating Rod Bushings	Sectional Packing)	Valve Rings, All Shapes

Northwestern University. He entered railway service in June, 1915, as a freight clerk of the I.C. at Chicago, and three years later he was granted a leave of absence to serve in the armed forces during World War I. In February, 1921, Mr. Sublett returned to the I.C. as a clerk in the operating department, subsequently holding several minor

Charles A. Sublett

positions until March, 1925, when he was promoted to traveling freight and passenger agent, with headquarters at Carbondale, Ill. In 1938 he was promoted to assistant general freight agent at Chicago, and in 1941 he was appointed office manager to the vice-president in charge of traffic, with the same headquarters. One year later Mr. Sublett was reappointed assistant general freight agent, which post he held until November, 1944, when he was advanced to general freight agent. He was serving in the latter capacity at the time of his new appointment.

William F. Henry, assistant chief of tariff bureau of the Akron, Canton & Youngstown, has been appointed chief of tariff bureau, with headquarters at Akron, Ohio. The position of assistant chief of tariff bureau has been abolished.

E. C. Derr, traveling freight and passenger agent of the Chicago, Milwaukee, St. Paul & Pacific, at Winston-Salem, N. C., has been appointed general agent at Atlanta, Ga., succeeding **F. K. Beem,** whose promotion to assistant general agent, freight department, with headquarters at Chicago, was reported in *Railway Age* of April 17.

Stanley T. Thorson, city passenger agent of the Great Northern, with headquarters at Spokane, Wash., has been appointed district passenger agent at St. Paul, Minn.

Edmond H. Gaiennie, whose promotion to general traffic manager of the Toledo, Peoria & Western, at Peoria, Ill., was reported in *Railway Age* of March 27, was born on December 2, 1909, at Kansas City, Mo. He received his higher education at Washington University, in St. Louis, Mo., and began his railroad career with the St. Louis-San Francisco in 1934, at St. Louis. Mr. Gaiennie subsequently served, successively, as soliciting freight and passenger agent at Cleveland, Ohio; traveling freight and passenger agent at Chicago; and traffic representative at Oklahoma City, Okla. From 1941 to 1944, he was traffic representative for the Frisco and representative of the Western Military Bureau, at Ft. Sill, Okla. Following service in the Navy during 1944, 1945 and 1946, he returned to the Frisco as general agent, passenger department, with headquarters at Chicago. In 1947 he was appointed traffic manager of the T. P. & W., at Chicago, which post he held until his recent appointment.

C. P. Bradley, whose promotion to general passenger agent of the Chicago, Rock Island & Pacific at Kansas City, Mo., was reported in *Railway Age* of April 3, is a native of Fairbury, Neb., and joined the Rock Island's traffic department in that city in 1914. He later

C. P. Bradley

served, successively, at Des Moines, Iowa, Oklahoma City, Okla., Atlanta, Ga., and Detroit, Mich. On April 1, 1942, Mr. Bradley was appointed general agent, passenger department, with headquarters at New York, which post he held at the time of his new appointment.

W. E. Lillis has been appointed assistant general freight agent of the Detroit, Toledo & Ironton.

MECHANICAL

Paul Thomas, master mechanic of the Panhandle division of the Pennsylvania, has been transferred to Indianapolis, Ind., succeeding **W. V. Amig,** transferred to Forest Park, Long Island, N. Y.

Arthur H. Keys, whose appointment as superintendent car department of the Baltimore & Ohio at Baltimore, Md., was reported in *Railway Age* of April 10, entered railroad service in 1913 with the Baltimore & Ohio at Pittsburgh, Pa. He was advanced to car foreman at Youngstown, Ohio, in 1918, becoming general car foreman at the Riverside shops at Baltimore in 1925. He was promoted to district master car builder at Glenwood,

Arthur H. Keys

Pa., in 1933, and was promoted to assistant superintendent car department at Baltimore in January, 1944, holding the latter position until his recent promotion to superintendent car department.

PURCHASES and STORES

James R. Cade, whose appointment as assistant purchasing agent of the Southern Pacific Lines in Texas and Louisiana, with headquarters at New Orleans, La., was reported in *Railway Age* of March 20, was born on March 23, 1904, at Houston, Tex., and received his public school and business college education in that city. He began his railroad career with the S. P. in 1925, as a store accountant at Yoakum, Tex.,

James R. Cade

and in the following year was transferred to Houston. He later held positions, successively, as chief clerk to division auditor, chief clerk at the road's wood preserving works, assistant bridge and building supervisor and statistician in the chief engineer's office. In January of this year, Mr. Cade was appointed

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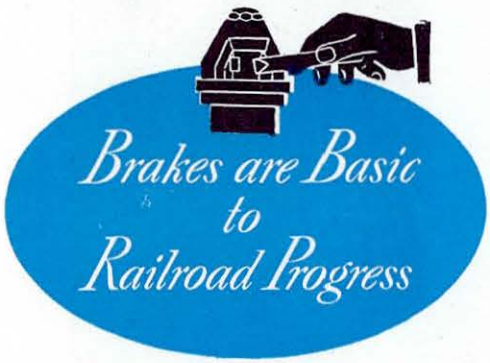
The H·S·C *brake*

doesn't have to wait for its "second wind"



One of the big advantages of the HSC Electro-Pneumatic Brake is its flexibility — derived from electro-pneumatic control.

With HSC Electro-Pneumatic Brakes, application is controlled electrically, instead of by pressure reduction in the brake pipe. The brake pipe continuously supplies storage reservoirs on each car, which are constantly recharged as air is used. HSC Brakes never have to wait for their "second wind."

To match the comfort and safety of your modern equipment with maximum comfort and safety in brakes, we recommend this modern combination:

"HSC" Electro-Pneumatic Brake . . . for brake flexibility to match modern train speeds, and unequaled smooth action. Speed Governor Control . . . for regulating brake forces to wheel speeds. "AP" Decelostat . . . for wheel slip detection to keep the wheels rolling.

Westinghouse Air Brake Co.

WILMERDING, PA.

tie and timber agent at New Orleans, which post he held at the time of his more recent appointment.

ENGINEERING and SIGNALING

R. W. Putnam, whose promotion to engineer maintenance of way and structures, of the Southern Pacific, with headquarters at San Francisco, Cal., was reported in *Railway Age* of April 3, was born on March 23, 1888, at Buffalo Gap, S.D. He received his higher education at State Normal School in Spearfish, S.D., and at Colorado College in Colorado Springs, Colo., having been awarded a B.S. in civil engineering by the latter institution in 1912. Shortly thereafter, Mr. Putnam

R. W. Putnam

joined the S. P. as a member of a surveying crew in Oregon. He later held positions, successively, as rodman, instrumentman, assistant engineer, general track foreman, roadmaster and assistant division engineer on the road's lines in Oregon. He was advanced to division engineer at El Paso, Tex., in 1940, and to assistant engineer maintenance of way and structures, at San Francisco, in 1943. Mr. Putnam was serving in the latter capacity at the time of his recent promotion.

J. W. Buford, assistant division engineer of the Pennsylvania at Harrisburg, Pa., has been appointed division engineer at Logansport, Ind., succeeding **E. E. Kinzel,** appointed tax agent in the real estate department at Philadelphia.

SPECIAL

James G. Shannon, whose retirement as general manager of the Mid-Central department of the Railway Express Agency, at Chicago, was reported in *Railway Age* of April 17, began his express career as a wagon driver in his home town of Fayetteville, Ark., in 1899. During the subsequent two decades, Mr. Shannon served in various capacities in Arkansas, Missouri, Oklahoma and New Mexisco, and, with the consolidation of the express companies in 1918, he was appointed superintendent, bureau of organization, with headquarters at Chicago. Two years later he was appointed superintendent of the Central Illinois division, and served in that post until April, 1931, when he was appointed head of the Western Illinois-Eastern Iowa division. Following a brief period of service in New York in 1937 as superintendent of organization, he returned to Chicago as assistant to vice-president. In January, 1940, Mr. Shannon was promoted to general manager, Mid-Central Department, which post he held at the time of his retirement.

OBITUARY

Fred Lawrence Thompson, retired vice-president in charge of engineering of the Illinois Central, whose death was reported in *Railway Age* of March 6, was associated with that road for 46 years, and was vice-president for 17 years prior to his retirement in 1942. He was born on February 1, 1872, at Grandview, Ill., and obtained his higher education at the University of Illinois, from which he received a B.S. degree in civil engineering. Mr. Thompson entered railroad service with the I. C. in 1896, serving subsequently as axeman, chainman and rodman. He later held positions, successively, as resident engineer, assistant engineer, acting roadmaster and roadmaster. He was advanced to assistant engineer of bridges and buildings in 1907, to engineer of bridges and buildings in 1910, and to engineer of construction in 1913. Mr. Thompson's next post was that of assistant chief engineer, which position he held from 1914 to 1918, when he became chief engineer. On February 1, 1925, he was elected vice-president in charge of engineering, and served in that capacity until his retirement. For two years during World War II, Mr.

Fred Lawrence Thompson

Thompson was associated with the Office of Defense Transportation as transportation expert in charge of allocating rail, with headquarters at Washington, D. C., and Chicago.

R. W. Morrison, president of the Texas-Mexican, with headquarters at San Antonio, Tex., died in that city on April 3.

A group of Canadian Pacific officers inspecting a new ticket issuing and accounting machine recently installed in Windsor Station, Montreal, Que. (See *Railway Age* of March 27, page 65). Left to right are: W. A. Newman, manager, research department; R. G. McNeillie, passenger traffic manager; D. S. Thomson, general manager, Eastern region; E. A. Leslie, vice-president and comptroller; G. A. McNamara, vice-president, traffic; C. E. Jefferson, general traffic manager; and L. B. Unwin, vice-president, finance

Current Publications

TRADE PUBLICATIONS

Lorains in Industry—modern material-handling methods, 16 pages, printed in color. Published by the Thew Shovel Company, Lorain, Ohio.

This booklet contains 46 separate photographs illustrating this company's Lorain cranes at work on many different material-handling assignments. It emphasizes the mobility of Lorain cranes and recommends "crane-handling" instead of "man-handling" as a means of conserving manpower and insuring efficiency in material-handling jobs.

Type Designs of Coaling Stations, Cinder-Handling Plants and Sand Plants. 18 pages. Published by Roberts & Schaefer Co., Chicago.

This is a booklet of drawings which include eight designs of reinforced concrete coaling stations, eight designs of structural-steel coaling stations, five designs of cinder plants and engine coalers, and six designs of sand plants. It also includes one page of drawings showing mechanical equipment for coaling stations. These designs, functionally complete in themselves, can be used as a basis for making detail plans, or they can be used as a manual for conceiving specialized requirements. Attractively bound, the drawings are presented as blue-line prints.

PAMPHLETS

Transportation Factors in the Location of the Cast Iron Pipe Industry, by James C. Nelson and Robert C. Smith. 54 pages. Published by the United States Department of Commerce; available from the Government Printing Office, Washington 25, D.C. Price, 25 cents.

In response to the widespread interest in transportation as a factor in plant location and area development, the Transportation Division, Office of Domestic Commerce, has inaugurated a limited program of traffic flow and industrial location data showing state-to-state, intraregional, and interregional flows of traffic by major commodity groups and to reveal, to the extent possible, the significance of freight rates and services upon the location of particular industries.

The present report, on the cast iron pipe industry, represents the first of the case studies of particular industries and is issued as Economic Series No. 63.

Clark Gas and Electric Fork Trucks—and Industrial Towing Tractors. Clark Equipment Company, Tructractor Division, Battle Creek 67, Mich. Free.

This pamphlet contains pictures and specifications of the materials-handling equipment manufactured by Clark. Dimensional specifications are included. Also shown are the various attachments for the different units. Included too is a list of Clark representatives and pictures of Clark units at work in various industries.

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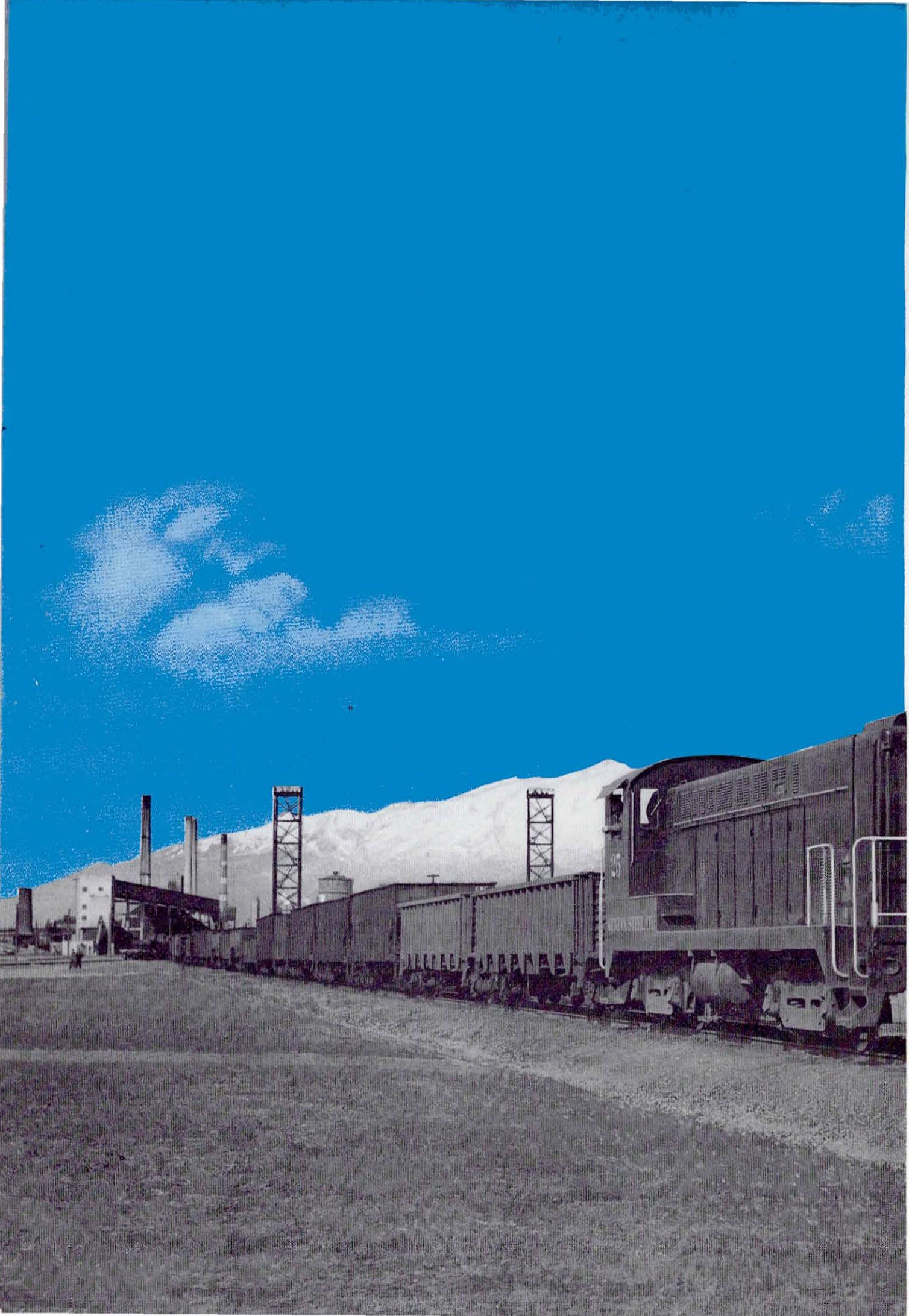

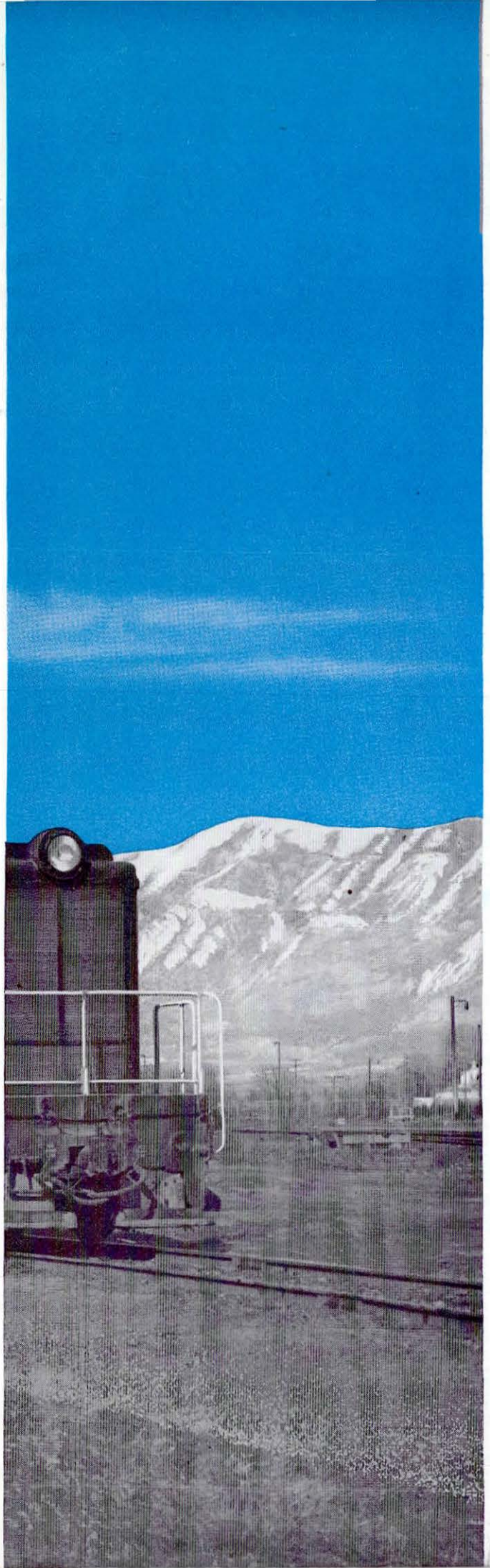

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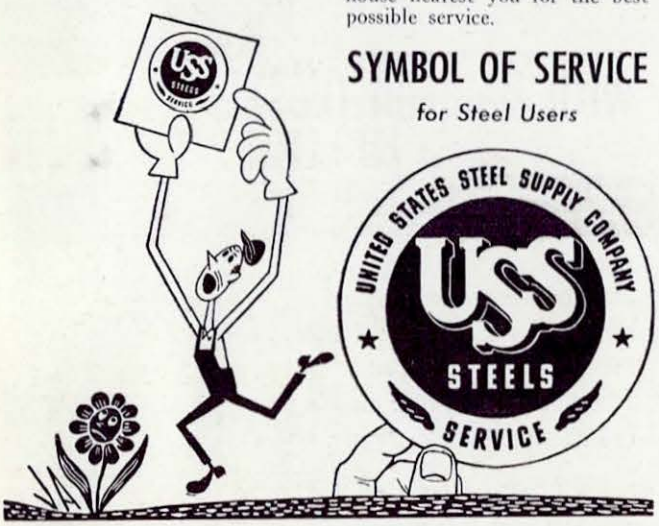

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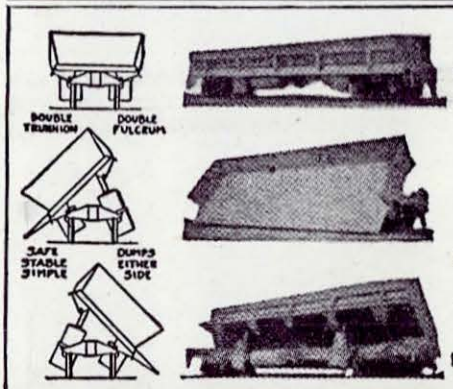

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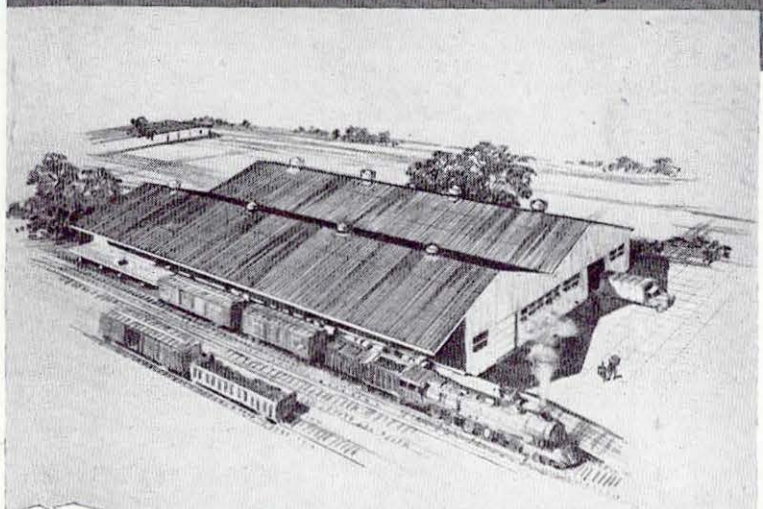

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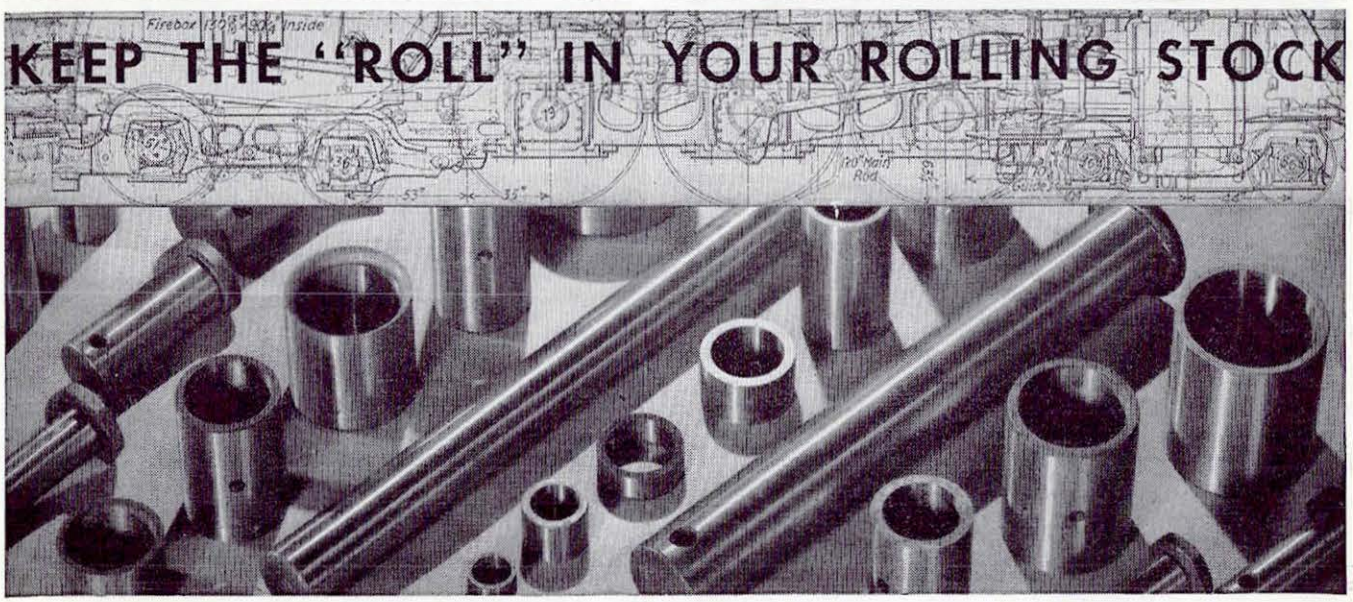

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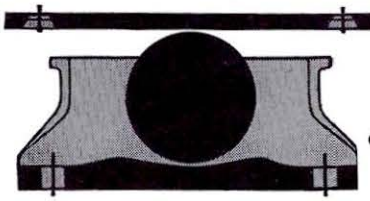

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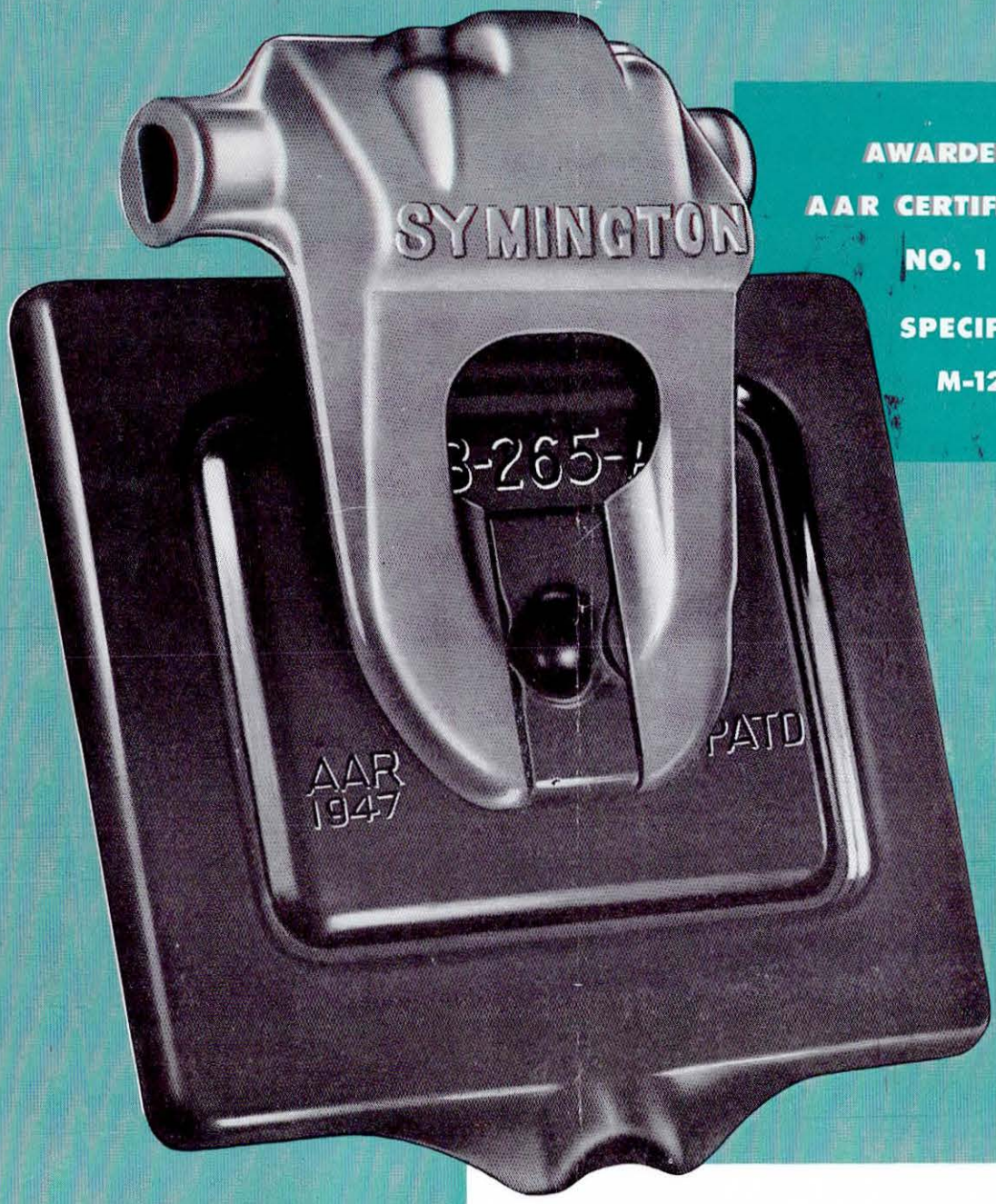
The Chicago & North Western Railway will celebrate its 100th anniversary this year—commemorating a century of progress in railway development which began with the granting of its charter on October 25, 1848, and the operation of The Pioneer—first locomotive placed in service out of Chicago. This occasion will be one of unusual historical interest to railway men. It will focus widespread attention on the railroad's current improvement activity, and on the equipment used in these improvements.

In cooperation with the railway through Mr. Frank Koval, assistant to the president of the Chicago & North Western, arrangements are being made to publish a centennial feature in the October 30 issue of *Railway Age*. Timed to appear during the same week as the railroad's gala celebration on October 25, it will trace the highly interesting historical development of the C. & N. W.—the first western railway and the road which started Chicago on its way to the world's greatest railway center.

Editorial attention will also be concentrated on C. & N. W.'s modern facilities and equipment and the improvements in progress, such as its new $1,800,000 Diesel locomotive shop and its extensive program of centralized traffic control.

Photographs, historical information, and data on the railroad's new improvements will be available to manufacturers who wish to feature an "on the North Western" advertisement in the October 30 *Railway Age*.



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MISSOURI PACIFIC LINES

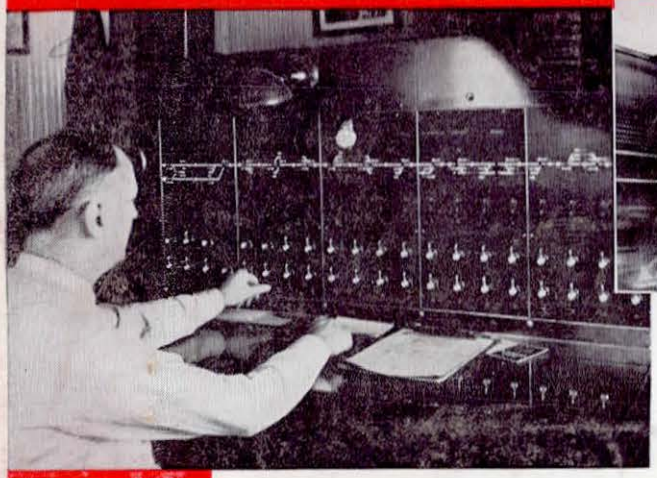
SAVES 1 MINUTE PER MILE!

CANADIAN NATIONAL RAILWAYS

REDUCES TRAIN TIME 30%!

Burlington Route

SAVES AN AVERAGE OF 32 MINUTES PER MANIFEST FREIGHT



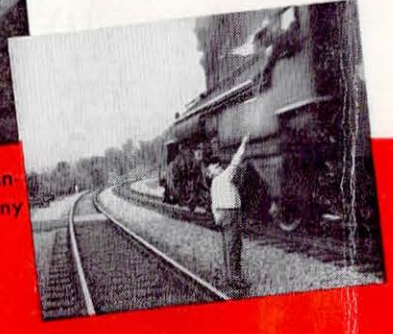
These outstanding advantages are being obtained through **G-R-S CENTRALIZED TRAFFIC CONTROL**

What can $\overline{\text{CTC}}$ do for you?

- Handle maximum traffic at any hour, day or night.
- Eliminate stops or slow speed for delivery of train orders.
- Eliminate the majority of stops when train takes siding.
- Closer meets and passes due to the flexibility of the system.
- Move more gross tons per train-hour without additional trackage.

You, too, can obtain many advantages by installing G-R-S $\overline{\text{CTC}}$. Ask our nearest District Office to make a study to determine the exact benefits you can obtain. No obligation.

The train order method was instituted in 1851. Today—in many localities—it is inadequate.



GENERAL RAILWAY SIGNAL COMPANY

Rochester 2, N.Y.

New York San Francisco Chicago St. Louis